

Refine Search

Search Results -

Terms	Documents
L3 same (inhibit\$ or analog)	12

Database:

US Pre-Grant Publication Full-Text Database
 US Patents Full-Text Database
 US OCR Full-Text Database
 EPO Abstracts Database
 JPO Abstracts Database
 Derwent World Patents Index
 IBM Technical Disclosure Bulletins

Search:

L5

Refine Search

Recall Text

Clear

Interrupt

Search History

DATE: Wednesday, November 22, 2006 [Purge Queries](#) [Printable Copy](#) [Create Case](#)

Set Name Query
 side by side

Hit Count Set Name
 result set

DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=NO; OP=OR

<u>L5</u>	L3 same (inhibit\$ or analog)	12	<u>L5</u>
<u>L4</u>	L3 same inhibit\$ or (substrate (3n) analog)	2759926	<u>L4</u>
<u>L3</u>	L2 same (st3 or st3gal)	68	<u>L3</u>
<u>L2</u>	sialyl or sialic or sialyltransferase	8671	<u>L2</u>
<u>L1</u>	6376475.pn. or 6280989.pn.	4	<u>L1</u>

END OF SEARCH HISTORY

```

s (sialyltransferase or sialyl or sialic) (s) inhibit?
Processing
Processing
    12762    SIALYLTRANSFERASE
    24632    SIALYL
    88288    SIALIC
    9193986  INHIBIT?
S1      17065  S (SIALYLTRANSFERASE OR SIALYL OR SIALIC) (S) INHIBIT?

? s s2 and (substrate (s) analog)
>>>W: "S2" does not exist
    0      S2
    2052422 SUBSTRATE
    640086  ANALOG
    20025   SUBSTRATE(S) ANALOG
S2      0    S S2 AND (SUBSTRATE (S) ANALOG)

? s s1 and (substrate (s) analog?)
Processing
    17065    S1
    2052422  SUBSTRATE
    2552224  ANALOG?
    77671    SUBSTRATE(S) ANALOG?
S3      134   S S1 AND (SUBSTRATE (S) ANALOG?)

? s s1 and (atherosclero? or clot?)
Processing
    17065    S1
    504395   ATHEROSCLERO?
    419712   CLOT?
S4      215   S S1 AND (ATHEROSCLERO? OR CLOT?)

? rd
Processing
>>>W: Duplicate detection is not supported for File 393.
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S5      105   RD (UNIQUE ITEMS)

? s (s5 or s2) and (vwf or factor)
    105      S5
    0        S2
    28595    VWF
    7365800  FACTOR
S6      43    S (S5 OR S2) AND (VWF OR FACTOR)

? rd
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S7      43    RD (UNIQUE ITEMS)

? show files

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Set	Items	Description
S1	17065	S (SIALYLTRANSFERASE OR SIALYL OR SIALIC) (S) INHIBIT?
S2	0	S S2 AND (SUBSTRATE (S) ANALOG)
S3	134	S S1 AND (SUBSTRATE (S) ANALOG?)
S4	215	S S1 AND (ATHEROSCLERO? OR CLOT?)
S5	105	RD (unique items)
S6	43	S (S5 OR S2) AND (VWF OR FACTOR)
S7	43	RD (unique items)

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- Ability to set up Dialog Alerts by Chemical Structures and the addition of Index Chemicus as a structure searchable database
- Support for connections to STN Germany and STN Japan services

Show Preferences for details

? Help Log On Msg
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NEW FILES RELEASED

***Engineering Index Backfile (File 988)
***Verdict Market Research (File 769)
***EMCare (File 45)
***Trademarkscan - South Korea (File 655)

RESUMED UPDATING

***File 141, Reader's Guide Abstracts

RELOADS COMPLETED

***Files 173 & 973, Adis Clinical Trials Insight

***File 11, PsycInfo

***File 531, American Business Directory

*** The 2005 reload of the CLAIMS files (Files 340, 341, 942)
is now available online.

DATABASES REMOVED

***File 196, FINDEX

***File 468, Public Opinion Online (POLL)

Chemical Structure Searching now available in Prous Science Drug
Data Report (F452), Prous Science Drugs of the Future (F453),
IMS R&D Focus (F445/955), Pharmaprojects (F128/928), Beilstein
Facts (F390), Derwent Chemistry Resource (F355) and Index Chemicus
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? s (sialyltransferase or sialyl or sialic) (s) inhibit?

Processing

Processing

12762 SIALYLTRANSFERASE

24632 SIALYL

88288 SIALIC

9193986 INHIBIT?

S1 17065 S (SIALYLTRANSFERASE OR SIALYL OR SIALIC) (S) INHIBIT?

? s s2 and (substrate (s) analog)

>>>W: "S2" does not exist

0 S2

2052422 SUBSTRATE

640086 ANALOG

20025 SUBSTRATE(S) ANALOG

S2 0 S S2 AND (SUBSTRATE (S) ANALOG)

? s s1 and (substrate (s) analog?)

Processing

17065 S1

2052422 SUBSTRATE

2552224 ANALOG?

77671 SUBSTRATE(S) ANALOG?

S3 134 S S1 AND (SUBSTRATE (S) ANALOG?)

? s s1 and (atherosclero? or clot?)

Processing

17065 S1

504395 ATHEROSCLERO?

419712 CLOT?

S4 215 S S1 AND (ATHEROSCLERO? OR CLOT?)

? rd

Processing

>>>W: Duplicate detection is not supported for File 393.

Records from unsupported files will be retained in the RD set.

S5 105 RD (UNIQUE ITEMS)

? s (s5 or s2) and (vwf or factor)

105 S5

0 S2

28595 VWF

7365800 FACTOR
S6 43 S (S5 OR S2) AND (VWF OR FACTOR)

? rd

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S7 43 RD (UNIQUE ITEMS)

? show files

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Set	Items	Description
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S2	0	S S2 AND (SUBSTRATE (S) ANALOG)
S3	134	S S1 AND (SUBSTRATE (S) ANALOG?)
S4	215	S S1 AND (ATHEROSCLERO? OR CLOT?)

S5 105 RD (unique items)
S6 43 S (S5 OR S2) AND (VWF OR FACTOR)
S7 43 RD (unique items)
; t /3,k/all
>>>W: KWIC option is not available in file(s): 399

7/3,K/1 (Item 1 from file: 5) [Links](#)
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0015028674 Biosis No.: 200400399463

Disialoganglioside (GD3) synthase gene expression suppresses vascular smooth muscle cell responses via the inhibition of ERK1/2 phosphorylation, cell cycle progression, and matrix metalloproteinase-9 expression

Author: Moon Sung-Kwon; Kim Hong-Man; Lee Young-Choon; Kim Cheorl-Ho (Reprint)

Author Address: Coll Oriental MedMinist Sci and TechnolNRL Glycobiol, Dongguk Univ, Sukjang Dong 707, Kyungju City, Kyungbuk, 780714, South Korea**South Korea

Author E-mail Address: chkimbio@dongguk.ac.kr

Journal: Journal of Biological Chemistry 279 (32): p 33063-33070 August 6, 2004 2004

Medium: print

ISSN: 0021-9258

Document Type: Article

Record Type: Abstract

Language: English

Abstract: Sialic acid-containing glycosphingolipids (gangliosides) have been implicated in the regulation of various biological phenomena such as **atherosclerosis**. Recent report suggests that exogenously supplied disialoganglioside (GD3) serves a dual role in vascular smooth... ..synthesis was examined. The results show that the overexpression of this gene has a potent **inhibitory** effect on DNA synthesis and ERK phosphorylation in cultured VSMC in the presence of PDGF... ..was correlated with the down-regulation of cyclinE/CDK2, the up-regulation of the CDK **inhibitor** p21 and blocking of the p27 **inhibition**, whereas up-regulation of p53 as the result of GD3 synthase gene expression was not... ..and cell cycle proteins. The expression of the GD3 synthase gene also led to the **inhibition** of TNF-alpha-induced matrix metalloproteinase-9 (MMP-9) expression in VSMC as determined by... ..synthase gene expression strongly decreased MMP-9 promoter activity in response to TNF-alpha. This **inhibition** was characterized by the downregulation of MMP-9, which was transcriptionally regulated at NF-kappaBgene represents a physiological modulator of VSMC responses that may contribute to plaque instability in **atherosclerosis**.

Descriptors:

Chemicals & Biochemicals: ...NF-kappa-B {nuclear factor-kappa-B... ..PDGF {platelet-derived growth factor}

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0014143128 Biosis No.: 200300101847

Relation of serum sialic acid to blood coagulation activity in type 2 diabetes.

Author: Wakabayashi I (Reprint); Masuda H

Author Address: Department of Hygiene and Preventive Medicine, School of Medicine, Yamagata University, Iida-Nishi 2-2-2, Yamagata, 990-9585, Japan**Japan

Author E-mail Address: wakabaya@med.id.yamagata-u.ac.jp

Journal: Blood Coagulation and Fibrinolysis 13 (8): p 691-696 December 2002 2002

Medium: print

ISSN: 0957-5235

Document Type: Article

Record Type: Abstract

Language: English

Abstract: The level of serum **sialic acid**, which is known to reflect **atherosclerotic** progress and to be related to the incidence of cardiovascular diseases, is increased in patients with diabetes. To elucidate the mechanism of the relation of serum **sialic acid** to fibrinogen, the relationship between serum **sialic acid** and markers of blood coagulation activity was investigated in type 2 diabetic patients. The concentration of serum **sialic acid** showed significant positive correlations with blood platelet count and with plasma concentrations of fibrinogen, D-dimer, thrombin-antithrombin III complex and plasmin-alpha2 plasmin **inhibitor** complex. These relationships were still significant after adjustment for age, sex, smoking history, body mass... ..arterial pressure and low-density lipoprotein cholesterol. The correlation coefficient of blood fibrinogen with serum **sialic acid** was still significant after adjustment for D-dimer, thrombin-antithrombin III complex or plasmin-alpha2 plasmin **inhibitor** complex. On the contrary, blood fibrinogen showed no significant correlation with D-dimer, thrombin-antithrombin III complex or plasmin-alpha2 plasmin **inhibitor** complex, although an increase in blood fibrinogen is known to be an **atherosclerotic risk factor**. These results suggest that the serum **sialic acid** level reflects blood coagulation activity in type 2 diabetic patients and is related to...

7/3,K/3 (Item 3 from file: 5) [Links](#)

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0012812226 Biosis No.: 200000530539

Electronegative LDL from normolipemic subjects induces IL-8 and monocyte chemotactic protein secretion by human endothelial cells

Author: De Castellarnau Conxita (Reprint); Sanchez-Quesada Jose Luis; Benitez Sonia ; Rosa Roser; Caveda Luis; Vila Luis; Ordonez-Llanos Jordi

Author Address: Rosellon 12, 4th 1a Esc A, 08029, Barcelona, Spain**Spain

Journal: Arteriosclerosis Thrombosis and Vascular Biology 20 (10): p 2281-2287 October, 2000 2000

Medium: print

ISSN: 1079-5642

Document Type: Article

Record Type: Abstract

Language: English

Abstract: ...8 (IL-8) and monocyte chemotactic protein-1 (MCP-1)) and in the plasminogen activator **inhibitor-1** (PAI-1). LDL(-), isolated by anion-exchange chromatography, differed from nonelectronegative LDL (LDL(+)) in its higher triglyceride, nonesterified fatty acid, apoprotein E and apoprotein C-III, and **sialic** acid contents. No evidence of extensive oxidation was found in LDL(-); its antioxidant and thiobarbituricnot with LDL(+). However, no cytotoxic effects of LDL(-) were observed on ECs. Actinomycin D **inhibited** the release of IL-8 and MCP-1 induced by LDL(-) and oxLDL by up... ..that their production is mediated by protein synthesis. Incubation of ECs with N-acetyl cysteine **inhibited** production of IL-8 and MCP-1 induced by LDL(-) and oxLDL by >50%. The free radical scavenger butylated hydroxytoluene slightly **inhibited** the effect of oxLDL but did not modify the effect of LDL(-). An antagonist (BN-50730) of the platelet-activating **factor** receptor **inhibited** production of both chemokines by LDL(-) and oxLDL in a concentration-dependent manner. Our results indicate that LDL(-) shows proinflammatory activity on ECs and may contribute to early **atherosclerotic** events.

Descriptors:

Chemicals & Biochemicals: ...platelet-activating **factor** receptor antagonist...

7/3,K/4 (Item 4 from file: 5) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)

Biosis Previews(R)

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0010833690 Biosis No.: 199799467750

Monocyte adhesion to activated aortic endothelium: Role of L-selectin and heparan sulfate proteoglycans

Author: Giuffre Laura; Cordey Anne-Sophie; Monai Natacha; Tardy Yanik; Schapira Marc; Spertini Olivier
(Reprint)

Author Address: Div. Hematol., Univ. Lausanne, 1011-CHUV Lausanne, Switzerland**Switzerland

Journal: Journal of Cell Biology 136 (4): p 945-956 1997 1997

ISSN: 0021-9525

Document Type: Article

Record Type: Abstract

Language: English

Abstract: ...role of L-selectin in monocyte adhesion to arterial endothelium, a key pathogenic event of **atherosclerosis**. Using a nonstatic (rotation) adhesion assay, we observed that monocyte binding to bovine aortic endothelium at 4 degree C increased four to nine times upon endothelium activation with tumor necrosis **factor** (TNF)-alpha. mAb-blocking experiments demonstrated that L-selectin mediates a major part (64 +/- 18... ...binding to cytokine-activated and, unexpectedly, unactivated aortic cells. Soluble L-selectin binding was completely **inhibited** by anti-L-selectin mAb or by aortic cell exposure to trypsin. Experiments with cycloheximide, chlorate, or neuraminidase showed that protein synthesis and sulfate groups, but not **sialic** acid residues, were essential for L-selectin counterreceptor function. Moreover, heparin lyases partially **inhibited** soluble L-selectin binding to cytokine-activated aortic cells, whereas a stronger **inhibition** was seen with unstimulated endothelial cells, suggesting that cytokine activation could induce the expression of... ...for L-selectin, distinct from heparan sulfate proteoglycans. Under flow, endothelial cell treatment with heparinase **inhibited** by apprx 80% monocyte attachment to TNF-alpha-activated aortic endothelium, indicating a major role...

Descriptors:

Miscellaneous Terms: ...**ATHEROSCLEROSIS**; ... **TUMOR NECROSIS FACTOR-ALPHA**

7/3,K/5 (Item 5 from file: 5) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)

Biosis Previews(R)

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0008779809 Biosis No.: 199395082075

Carbohydrate residues modulate the activation of coagulation factor X

Author: Sinha Uma (Reprint); Wolf David L

Author Address: COR Therapeutics Inc., 256 E. Grand Ave., South San Francisco, CA 94080, USA**USA

Journal: Journal of Biological Chemistry 268 (5): p 3048-3051 1993

ISSN: 0021-9258

Document Type: Article

Record Type: Abstract

Language: English

Carbohydrate residues modulate the activation of coagulation factor X

Abstract: Factor X is a plasma protein involved in both the intrinsic and extrinsic pathways of blood...
...instrumental in regulating biological activity, the role of glycosylation in the function and properties of factor X has not been previously investigated. We utilized lectin binding and glycosidase treatment to investigate the functional role of carbohydrates on the activation peptide of factor X. Sambucus nigra agglutinin, a lectin that binds to sialic acid terminally linked alpha(2-6) to galactose or N-acetylgalactosamine inhibits activation of human factor X in a dose-dependent manner. Inhibition of activation was observed for both intrinsic (factor IXa/VIIIa) and extrinsic (factor VIIa/tissue factor) pathway complexes. In accordance with this, selective removal of sialic acid residues on the activation peptide of factor X by neuraminidase also results in a drastic reduction of activation of the zymogen by these complexes. Corresponding reduction of activity in classical clotting assays (activated partial thromboplastin time and prothrombin time) also agrees with this observation. These results suggest a possible role of N-linked carbohydrates in the activation of factor X.

Registry Numbers: ...FACTOR X

Descriptors:

Chemicals & Biochemicals: FACTOR X...

7/3,K/6 (Item 6 from file: 5) [Links](#)

Fulltext available through: [ScienceDirect \(Elsevier\)](#) [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)
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0008390694 Biosis No.: 199294092535

**HEPARIN COFACTOR II DEFICIENCY IN THE ELDERLY COMPARISON WITH ANTITHROMBIN
III**

Author: KARIO K (Reprint); MATSUO T; KOBAYASHI H

Author Address: DEP INTERNAL MED, HYOGO PREFECTURAL AWAJI HOSP, SUMOTO 656,
JPN**JAPAN

Journal: Thrombosis Research 66 (5): p 489-498 1992

ISSN: 0049-3848

Document Type: Article

Record Type: Abstract

Language: ENGLISH

Abstract: ...HC II levels correlated significantly with AT III levels and with acute phase reactants including **sialic** acid, fibrinogen, and PAI-1. HC II levels also correlated with **factor** VII, plasminogen, .alpha.2 -plasmin **inhibitor**, serum lipid, pseudocholinesterase, and albumin levels. These correlations were also found for AT III except... ..also showed the same tendency. These results indicated a decrease in the reserve capacity to **inhibit** thrombin generation at sites of **atherosclerosis** in response to trigger events. The deficiency of two major antithrombin factors in the elderly...

Descriptors: HUMAN MALNUTRITION ACUTE PHASE REACTANT PSEUDOCHELINESTERASE
ALBUMIN ATHEROSCLEROSIS AGE EFFECT

7/3,K/7 (Item 7 from file: 5) [Links](#)

Fulltext available through: [ScienceDirect \(Elsevier\)](#) [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)
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0007106589 Biosis No.: 199089024480

ISOLATION AND CHARACTERIZATION OF FIBRINOGEN-CLOTTING ENZYME FROM VENOM OF THE SNAKE LACHESIS-MUTA-MUTA PERUVIAN BUSHMASTER

Author: YARLEQUE A (Reprint); CAMPOS S; ESCOBAR E; LAZO F; SANCHEZ N; HYSLOP S; MARSH N A; BUTTERWORTH P J; PRICE R G

Author Address: DEP PHYSIOL, KING'S COLL LONDON, KENSINGTON CAMPUS, CAMPDEN HILL RD, LONDON W8 7AH, UK**UK

Journal: Toxicon 27 (11): p 1189-1198 1989

ISSN: 0041-0101

Document Type: Article

Record Type: Abstract

Language: ENGLISH

ISOLATION AND CHARACTERIZATION OF FIBRINOGEN-CLOTTING ENZYME FROM VENOM OF THE SNAKE LACHESIS-MUTA-MUTA PERUVIAN BUSHMASTER

Abstract: A fibrinogen-clotting enzyme from the venom of the Peruvian bushmaster snake was purified to homogeneity by gel... ..content was 13.4%, comprised of 3.4% hexose, 8.7% hexosamine and 1.3% sialic acid. The enzyme was active against the synthetic amide substrate .alpha.-N-benzoyl-DL-arginine... ..The enzyme released fibrinopeptide A rapidly from purified human fibrinogen and fibrinopeptide B more slowly. Factor XIII was not activated and the clotting activity was not inhibited by heparin. A dose of 50 .mu.g/kg brought about defibrinogenation in anaesthetized rats...

7/3,K/8 (Item 8 from file: 5) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)

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0006085504 Biosis No.: 198885054395

THE FUNCTION OF THE HUMAN FACTOR V CARBOHYDRATE MOIETY IN BLOOD COAGULATION

Author: BRUIN T (Reprint); STURK A; CATE J W T; CATH M

Author Address: AFDELING HEMATOLOGIE, AKADEMISCH MEDISCH CENTRUM, UNIV AMSTERDAM, MEIBERGDRREEF 9, NL-1105-AZ AMSTERDAM, NETHERLANDS**NETHERLANDS

Journal: European Journal of Biochemistry 170 (1-2): p 305-310 1987

ISSN: 0014-2956

Document Type: Article

Record Type: Abstract

Language: ENGLISH

THE FUNCTION OF THE HUMAN FACTOR V CARBOHYDRATE MOIETY IN BLOOD COAGULATION

Abstract: Human factor V was subjected to desialation and deglycosylation to investigate the function of the molecular carbohydrate moiety. Removal of 90% of the sialic acid residues resulted in a 1.5-2-fold increase in clotting activity, and up to 70% deglycosylation in a concurrent decrease in clotting activity. Desialation had no effect on thrombin-induced activation, whereas deglycosylated factor V activation was impaired.

Lectin-blot experiments with sialic -acid-specific *Limax flavus* agglutinin (LFA), galactose-specific *Ricinus communis* agglutinin (RCA-II) and mannose-specific concanavalin A on thrombin-induced factor V fragments revealed the presence of carbohydrate residues in fragments B, C1, D and F1F2. Interestingly, sialic acid was present in C1 whilst galactose was not detectable. Fragment F1F2 contained terminal galactose residues. LFA and RCA-II inhibited the procoagulant activity of native factor V and of desialated factor V respectively. These investigations distinctly indicate the important role of the human factor V carbohydrate moiety in the process of blood coagulation.

7/3,K/9 (Item 9 from file: 5) [Links](#)

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Biosis Previews(R)

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0004265084 Biosis No.: 198478000491

EFFECTS OF ENZYMATIC DEGLYCOSYLATION ON THE BIOLOGICAL ACTIVITIES OF HUMAN THROMBIN AND ANTI THROMBIN

Author: ROSENFELD L (Reprint); DANISHEFSKY I

Author Address: DEP BIOCHEMISTRY, NEW YORK MED COLL, VALHALLA, NY 10595, USA**USA

Journal: Archives of Biochemistry and Biophysics 229 (1): p 359-367 1984

ISSN: 0003-9861

Document Type: Article

Record Type: Abstract

Language: ENGLISH

Abstract: ...beta.-N-acetylglucosaminidase, and endo-.beta.-N-acetylglucosaminidase D resulted in the successive removal of sialic acid, galactose, N-acetylglucosamine and mannose, and more N-acetylglucosamine residues. The products obtained after... ..expected from the cleavage of the sugar moieties. The modified thrombins did not lose fibrinogen-clotting activity, amidolytic activity, nor the ability to form complexes with antithrombin. Asialothrombin and asialoagalactothrombin caused... ..removal of sugars from antithrombin retained thrombin-neutralizing activity. In the presence of heparin the **inhibition** of thrombin as well as **factor Xa** was enhanced. The sugar residues of thrombin and antithrombin are not required for the formation of enzyme-**inhibitor** complexes or for the other activities that were measured.

Registry Numbers: ...**FACTOR-XA**

Descriptors: PLATELET HEPARIN HEMATOLOGIC-DRUG **FACTOR-XA** NEURAMINIDASE BETA GALACTOSIDASE BETA-N ACETYL GLUCOSAMINIDASE ENDO-BETA-N ACETYL GLUCOSAMINE MANNOSE GALACTOSE **SIALIC-ACID** FIBRINOGEN **CLOTTING** ACTIVITY AMIDOLYTIC ACTIVITY COMPLEX FORMATION **INHIBITION/**

Descriptors:

Chemicals & Biochemicals: ...**FACTOR-XA**

7/3,K/10 (Item 10 from file: 5) [Links](#)

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0003217004 Biosis No.: 198171035963

**FACTOR-VIII VON WILLEBRAND PROTEIN MODIFICATION OF ITS CARBOHYDRATE CAUSES
REDUCED BINDING TO PLATELETS**

Author: KAO K-J (Reprint); PIZZO S V; MCKEE P A

Author Address: HOWARD HUGHES MED INST LAB, DEP MED, DUKE UNIV MED CENT, DURHAM, NC
27710, USA**USA

Journal: Journal of Biological Chemistry 255 (21): p 10134-10139 1980

ISSN: 0021-9258

Document Type: Article

Record Type: Abstract

Language: ENGLISH

**FACTOR-VIII VON WILLEBRAND PROTEIN MODIFICATION OF ITS CARBOHYDRATE CAUSES
REDUCED BINDING TO PLATELETS**

Abstract: An abnormality in the carbohydrate structure of the blood-clotting glycoprotein, human factor VIII/von Willebrand factor (FVIII/ vWF), may give rise to the hemorrhagic disorder known as von Willebrand's disease. The sequential removal of sialic acid and galactose from FVIII/vWF causes a progressive diminution in the ability of human FVIII/vWF to support ristocetin-induced platelet aggregation. Experiments aimed at defining how modifications of carbohydrate side chains of FVIII/vWF protein cause a loss of platelet-aggregating activity are presently reported. The ristocetin cofactor activity of human FVIII/vWF was reduced to 39% after removal of 74% of the sialic acid by protease-free neuraminidase. Ristocetin cofactor activity was reduced further to 19% after oxidation of 39% of the galactose residues of asialo-FVIII/vWF by galactose oxidase treatment and was restored to 33% after potassium borohydride reduction of galactose-oxidized asialo-FVIII/vWF. The receptor-binding potency and affinity of each form of FVIII/vWF derivative was determined by employing a FVIII/vWF receptor-binding assay. The effective concentration to inhibit 50% binding of 0.2 .mu.g/ml of 125I-FVIII/vWF to 5 .times. 10⁶ platelets and the binding K_d for each form of FVIII/vWF are: 2.0 .mu.g/ml, 1.1 nM for native FVIII/vWF; 14.8 .mu.g/ml, 12.5 nM for asialo-FVIII/vWF ; 66 .mu.g/ml, 53.8 nM for galactose-oxidized asialo-FVIII/vWF; and 30 .mu.g/ml, 18.9 nM, for KBH₄-reduced galactose-oxidized asialo-FVIII/ vWF. A linear correlation between the log of receptor-binding affinity and the log of ristocetin cofactor activity was observed. The diminished ristocetin cofactor activity of FVIII/vWF having modified carbohydrate side chains results from reduced binding affinity for platelet FVIII/vWF receptors. The binding of FVIII/vWF to platelet receptors may be functionally relevant with respect to ristocetin cofactor activity.

Registry Numbers: ...FACTOR-VIII... ...FACTOR-VIII... ...FACTOR-VIII

Descriptors: VON WILLEBRANDS DISEASE NEURAMINIDASE GALACTOSE OXIDASE FACTOR-VIII
VON WILLEBRAND FACTOR RISTOCETIN COFACTOR AGGREGATION

Descriptors:

Chemicals & Biochemicals: FACTOR-VIII... ...FACTOR-VIII... ...FACTOR-VIII

7/3,K/11 (Item 1 from file: 34) [Links](#)

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15511928 **Genuine Article#:** 080RP **No. References:** 50

Reactive oxygen species mediates disialoganglioside GD3-induced inhibition of ERK1/2 and matrix metalloproteinase-9 expression in vascular smooth muscle cells

Author: Moon SK; Kang SK; Kim CH (REPRINT)

Corporate Source: Sungkyunkwan Univ,Dept Sci Biol, Mol & Cellular Glycobiol Unit,Chunchun Dong 300/Suwon 440746//South Korea/ (REPRINT); Sungkyunkwan Univ,Dept Sci Biol, Mol & Cellular Glycobiol Unit,Suwon 440746//South Korea/ (chkimbio@daum.net)

Journal: FASEB JOURNAL , 2006 , V 20 , N9 (JUL) , P 1387-1395

ISSN: 0892-6638 **Publication date:** 20060700

Publisher: FEDERATION AMER SOC EXP BIOL , 9650 ROCKVILLE PIKE, BETHESDA, MD 20814-3998 USA

Language: English **Document Type:** ARTICLE (ABSTRACT AVAILABLE)

Abstract: Sialic acid containing glycosphingolipids (gangliosides) are thought to play important roles in the function of various biological phenomena such as **atherosclerosis**. We have previously shown that the overexpression of the disialoganglioside (GD3) synthase gene effectively suppresses... ..VSMC). However, the issue of how the overexpression of GD3 synthase gene results in the **inhibition** of cellular responses in VSMC remains unclear. The findings herein demonstrate that overexpression of the... ..gene overexpression on VSMC proliferation and cell cycle regulation in response to platelet-derived growth factor (PDGF). In addition, we found that treatment with antioxidants reversed the decreased matrix metalloproteinase-9... ..in GD3 synthase gene-mediated VSMC phenotypic changes that may contribute to plaque instability in **atherosclerosis**.

Identifiers-- ...MITOCHONDRIAL PERMEABILITY TRANSITION; SIGNALING TRANSDUCTION PATHWAY; NECROSIS-FACTOR-ALPHA; GD3 GANGLIOSIDE; DNA DAMAGE; **ATHEROSCLEROSIS**; APOPTOSIS; GROWTH; GLYCOSPHINGOLIPIDS; PROLIFERATION

7/3,K/12 (Item 2 from file: 34) [Links](#)

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[SciSearch\(R\)](#) [Cited Ref Sci](#)

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14793520 **Genuine Article#:** 006GD **No. References:** 41

Colominic acid inhibits the proliferation of cultured bovine aortic endothelial cells and injures their monolayers: Cell density-dependent effects prevented by sulfation

Author: Yamamoto C; Morita Y; Yamaguchi S; Hayashi T; Kaji T (REPRINT)

Corporate Source: Hokuriku Univ,Fac Pharmaceut Sci, Dept Environm Hlth,Ho 3 Kanagawa machi/Kanazawa/Ishikawa 9201181/Japan/ (REPRINT); Hokuriku Univ,Fac Pharmaceut Sci, Dept Environm Hlth,Kanazawa/Ishikawa 9201181/Japan/; Marukin Bio Inc,Uji/Kyoto 6110013/Japan/; Toyama Med & Pharmaceut Univ,Fac Pharmaceut Sci, Dept Pharmacognosy,Toyama 9300194//Japan/ (t-kaji@hokuriku-u.ac.jp)

Journal: LIFE SCIENCES , 2006 , V 78 , N8 (JAN 18) , P 844-850

ISSN: 0024-3205 **Publication date:** 20060118

Publisher: PERGAMON-ELSEVIER SCIENCE LTD , THE BOULEVARD, LANGFORD LANE, KIDLINGTON, OXFORD OX5 1GB, ENGLAND

Language: English **Document Type:** ARTICLE (ABSTRACT AVAILABLE)

Abstract: Colominic acid (CA), produced by Escherichia coli K1, is a polymer of sialic acid linked through alpha (2 -> 8) glycosidic linkages. Although there are several studies on the... ..monolayer maintenance of bovine aortic endothelial cells in culture. The results indicate that CA potently **inhibits** the proliferation of sparse endothelial cells without nonspecific cell damage. The **inhibitory** effect of CA was markedly stronger than those of sodium spirulan and calcium spirulan, known polysaccharides that **inhibit** endothelial cell proliferation. On the other hand, in dense endothelial cells, CA induced nonspecific cell... ..results indicate that CA has two distinct effects on vascular endothelial cells: one is the **inhibition** of proliferation when the cell density is low, and the other is the nonspecific cytotoxicity... ..prevented by sulfation of the CA chains. Therefore, it is concluded that CA not only **inhibits** the proliferation of sparse endothelial cells without nonspecific cell damage but also injures dense cells...

Identifiers-- ...FIBROBLAST-GROWTH-FACTOR; SODIUM SPIRULAN; SIALIC-ACID; IN-VITRO; ANTITHROMBIN-III; CALCIUM SPIRULAN; HEPARIN; PLATENSIS; TYPE-1; **ATHEROSCLEROSIS**

7/3,K/13 (Item 3 from file: 34) [Links](#)

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13498119 **Genuine Article#:** 886ME **No. References:** 51

Effects of changes in body weight and insulin resistance on inflammation and endothelial function in morbid obesity after bariatric surgery

Author: Vazquez LA; Pazos F (REPRINT) ; Berrazueta JR; Fernandez-Escalante C; Garcia-Unzueta MT; Freijanes J; Amado JA

Corporate Source: Endocrine Unit,POB 2257/Santander 39080//Spain/ (REPRINT); Univ Cantabria,Univ Hosp Marques de Valdecilla, Endocrine Unit,E-39005 Santander//Spain/; Univ Cantabria,Univ Hosp Marques de Valdecilla, Serv Cardiol,E-39005 Santander//Spain/; Univ Cantabria,Univ Hosp Marques de Valdecilla, Surg Serv,E-39005 Santander//Spain/ (endptf@humv.es)

Journal: JOURNAL OF CLINICAL ENDOCRINOLOGY AND METABOLISM , 2005 , V 90 , N1 (JAN) , P 316-322

ISSN: 0021-972X **Publication date:** 20050100

Publisher: ENDOCRINE SOC , 8401 CONNECTICUT AVE, SUITE 900, CHEVY CHASE, MD 20815-5817 USA

Language: English **Document Type:** ARTICLE (ABSTRACT AVAILABLE)

Abstract: ...after weight loss following bariatric surgery. Circulating levels of E-selectin, P-selectin, plasminogen activator **inhibitor-1**, and von Willebrand **factor**, which were higher than those in the control group, decreased significantly after surgery. Plasma vascular... ...All inflammatory markers were higher in morbidly obese patients. After surgery, C-reactive protein and **sialic acid** diminished, whereas circulating levels of IL-6, TNF-alpha, and its soluble receptors did... ...changes in adiposity and SI and changes in C-reactive protein and between changes in **sialic acid** and changes in endothelial function. In conclusion, a marked improvement in SI, endothelial function...

Identifiers-- ...NECROSIS-**FACTOR-ALPHA**; REACTIVE PROTEIN-LEVELS; ACUTE-PHASE PROTEINS; **FACTOR-KAPPA-B**; NITRIC-OXIDE; **ATHEROSCLEROSIS RISK**; POSTMENOPAUSAL WOMEN; ADHESION MOLECULE-1; METABOLIC SYNDROME; MONONUCLEAR-CELLS

7/3,K/14 (Item 4 from file: 34) [Links](#)

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12889260 **Genuine Article#:** 831OX **No. References:** 40

Overexpression of GD3 synthase induces apoptosis of vascular endothelial ECV304 cells through downregulation of Bcl-2

Author: Ha KT; Lee YC; Kim CH (REPRINT)

Corporate Source: Dongguk Univ,MOST, Natl Res Lab Glycobiol,Kyungju 780714/Kyungbuk/South Korea/ (REPRINT); Dongguk Univ,MOST, Natl Res Lab Glycobiol,Kyungju 780714/Kyungbuk/South Korea/; Dongguk Univ,Coll Oriental Med, Dept Biochem & Mol Biol,Kyungju 780714/Kyungbuk/South Korea/; Dong A Univ,Fac Biotechnol,Pusan 604714//South Korea/ (chkimbio@dongguk.ac.kr)

Journal: FEBS LETTERS , 2004 , V 568 , N1-3 (JUN 18) , P 183-187

ISSN: 0014-5793 **Publication date:** 20040618

Publisher: ELSEVIER SCIENCE BV , PO BOX 211, 1000 AE AMSTERDAM, NETHERLANDS

Language: English **Document Type:** ARTICLE (ABSTRACT AVAILABLE)

Abstract: ...that the downregulation of Bcl-2 by overexpression of CMP-NeuAc:GM3 alpha-2,8-sialyltransferase (GD3 synthase) results in an accelerated apoptosis in vascular endothelial cells (ECV304), as evidenced by...
...CREB) was reduced by GD3 synthase overexpression. Moreover, the activation of CREB as a transcriptional factor was also inhibited, as evidenced by electrophoretic mobility shift assay. Therefore, we conclude that GD3 synthase has an...

Identifiers-- ...ELEMENT-BINDING PROTEIN; SMOOTH-MUSCLE-CELLS; EXPRESSION CLONING;
GANGLIOSIDE; ACTIVATION; DEATH; ATHEROSCLEROSIS; ANGIOGENESIS; INHIBITION;
MECHANISMS

7/3,K/15 (Item 1 from file: 71) [Links](#)

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00659218 97165980

Binding of the von Willebrand factor A1 domain to histone

Ward C.M.; Tetaz T.J.; Andrews R.K.; Berndt M.C.

Address: Dr. M.C. Berndt, Baker Medical Research Institute, P.O. Box 348, Prahran , Australia

Email: michael.berndt@baker.edu.au

Journal : Thrombosis Research , 86/6 (469-477) , 1997 , United Kingdom

PUBLICATION DATE: 19970000

CODEN: THBRA

ISSN: 0049-3848

Publisher Item Identifier: S0049384897000960

Document Type: Article

Languages: English **Summary Languages:** English

No. of References: 34

Binding of the von Willebrand factor A1 domain to histone

Activation of the von Willebrand Factor (vWF) A1 domain is a critical factor in regulating the interaction of vWF with its platelet membrane receptor, the glycoprotein (GP) Ib-IX-V complex. This activation controls vWF-dependent platelet adhesion at high shear. The vWF-GP Ib-IX-V interaction is induced in vivo by exposure of platelet-rich plasma to high shear force, or by association of vWF with one or more unidentified components of the subendothelial matrix. In vitro, soluble vWF is activated to bind to platelets by nonphysiological modulators, such as the bacterial glycopeptide, ristocetin, or the snake venom protein, botrocetin, or by removal of negatively-charged sialic acid residues. Analysis of vWF modulators and the very marked charge asymmetry of amine acid sequences within the A1 domain has led to an electrostatic model for vWF modulation. Endothelial membrane/matrix and detergent-soluble fractions of human placenta were screened for the ability to bind vWF by electrophoresis of extracts on SDS-polyacrylamide gels, electrotransferring to nitrocellulose and probing with fluid-phase sup 1sup 2sup 5I-labeled vWF or a 39/34-kDa vWF fragment (Leu-480-Gly-718) that encompasses the A1 domain. In the course of these studies, it was found that both vWF and the 39/34-kDa vWF fragment bound strongly to histone. Purified soluble histone also bound vWF since, like ristocetin, it induced vWF flocculation. Histone binding to vWF did not activate or inhibit vWF binding to platelets. While the vWF-histone interaction has no conceivable physiological role, it suggests that binding to the A1 domain of vWF alone is insufficient to modulate vWF adhesive activity. This implies that specific interactions of the vWF A1 domain with either ristocetin or botrocetin are required for GP Ib-IX-V recognition...

DESCRIPTORS:

von Willebrand Factor; histone

CLASSIFICATION CODE AND DESCRIPTION:

Molecular Sequence Databank Number: ...Clotting factors

82.12.2.3 - PROTEIN BIOCHEMISTRY

7/3,K/16 (Item 1 from file: 73) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)
EMBASE

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13626776 EMBASE No: 2006107550

Molecular diversity in venom from the Australian brown snake, *Pseudonaja textilis*

Birrell G.W.; Earl S.; Masci P.P.; de Jersey J.; Wallis T.P.; Gorman J.J.; Lavin M.F.

M.F. Lavin, The Queensland Cancer Fund Research Unit, The Queensland Inst. of Medical Research, P.O. Royal Brisbane Hospital, Brisbane, QLD 4029 Australia

Author Email: martin.lavin@qimr.edu.au

Molecular and Cellular Proteomics (MOL. CELL. PROTEOMICS) (United States) 2006 , 5/2 (379-389)

CODEN: MCPOB **ISSN:** 1535-9476

Document Type: Journal ; Article

Language: ENGLISH **Summary Language:** ENGLISH

Number Of References: 45

...bite in Australia. This venom is known to contain a prothrombin activator complex, serine proteinase **inhibitors**, various phospholipase ASUB2s, and pre- and postsynaptic neurotoxins. In this study, we performed a proteomic...
...of glycoproteins with N-linked sugars that include glucose/mannose, N-acetylgalactosamine, N-acetylglucosamine, and **sialic** acids. Additionally there are multiple isoforms of mammalian coagulation factors that comprise a significant proportion of the venom. Indeed two of the identified proteins, a procoagulant and a plasmin **inhibitor**, are currently in development as human therapeutic agents. (c) 2006 by The American Society for...

DRUG DESCRIPTORS:

...acetylglucosamine--endogenous compound--ec; n acetylgalactosamine --endogenous compound--ec; sialic acid--endogenous compound--ec; blood **clotting factor**--endogenous compound--ec; isoprotein --endogenous compound--ec; procoagulant--endogenous compound--ec; plasmin inhibitor--endogenous compound...

7/3,K/17 (Item 2 from file: 73) [Links](#)

Fulltext available through: [ScienceDirect \(Elsevier\)](#) [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)
EMBASE

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06194621 EMBASE No: 1995196114

Gender differences of disturbed hemostasis related to fasting insulin level in healthy very elderly Japanese aged ≥ 75 years

Kario K.; Matsuo T.; Kobayashi H.; Sakata T.; Miyata T.; Shimada K.

Department of Internal Medicine, Awaji-Hokudan Public Clinic, 480-2 Ikuha, Hokudan, Tsuna, Hyogo 656-16
Japan

Atherosclerosis (ATHEROSCLEROSIS) (Ireland) 1995, 116/2 (211-219)

CODEN: ATHSB ISSN: 0021-9150

Document Type: Journal ; Article

Language: ENGLISH Summary Language: ENGLISH

...relationship between fasting insulin level and various hemostatic factors, including fibrinolytic factors (active plasminogen activator **inhibitor-1** (PAI-1), tissue type plasminogen activator (tPA)-PAI-1 complex, plasmin-alpha₂-plasmin **inhibitor** (PIG), and D-dimer), coagulation factors (activated **factor VII**, **factor VII** coagulant activity and antigen, **factor VIII**, **factor X**, and fibrinogen), coagulation **inhibitors** (antithrombin III, heparin cofactor II, and protein C), and an acute phase marker (**sialic acid**) in 102 healthy individuals aged ≥ 75 years (46 men and 56 women). Active PAI... and hemostatic abnormalities, with the insulin level being positively correlated with coagulation factors in men (**factor VIII** activity: $r = 0.422$, $P < 0.01$; **factor VII** activity: $r = 0.386$, $P < 0.01$) and with hypofibrinolysis in women (active PAI... $r = 0.549$, $P < 0.0001$). Insulin levels were positively correlated with the levels of **factor VII** antigen and **factor VII** activity in men ($P < 0.01$), but there was no correlation with activated **factor VII** levels. The fasting insulin level was also correlated with the levels of heparin cofactor II and **sialic acid** in men ($P < 0.05$). However, other hemostatic factors were not related to the... either sex. Multiple linear regression analysis disclosed that insulin showed an independent positive correlation with **factor VIII** activity in men ($P < 0.001$) and with active PAI-1 in women ($P...$

DRUG DESCRIPTORS:

* blood clotting factor 7; *blood clotting factor 8; *insulin--endogenous compound--ec

MEDICAL DESCRIPTORS:

* atherosclerosis; *insulin blood level

CAS Registry Number: 9001-25-6 (blood clotting factor 7); 9001-27-8 (blood clotting factor 8); 9004-10-8 (insulin)

7/3,K/18 (Item 3 from file: 73) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)

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06145524 EMBASE No: 1995177680

Induction of tissue factor on monocytes by adhesion to endothelial cells

Lo S.K.; Cheung A.; Zheng Q.; Silverstein R.L.

Division of Hematology and Oncology, Cornell University Medical College, New York, NY 10021 United States

Journal of Immunology. (J. IMMUNOL.) (United States) 1995 , 154/9 (4768-4777)

CODEN: JOIMA ISSN: 0022-1767

Document Type: Journal ; Article

Language: ENGLISH Summary Language: ENGLISH

Induction of tissue factor on monocytes by adhesion to endothelial cells

Activated monocytes express tissue factor (TF), a protein that is important in the pathogenesis of thrombotic disorders. We sought to... ..TNF-treated EC had no effect. An anti-E-selectin mAb (H18/7) exerted partial inhibition, whereas anti-VCAM-1, ICAM-1, and CD11/CD18 mAbs had no inhibition. Synthetic Lewis X (Le(x)) oligosaccharide partially blocked TF induction, whereas sialyl-Le(x) (sLe(x)) oligosaccharide had no effect. Cross-linking Le(x) on monocytes, but...

DRUG DESCRIPTORS:

* bacterium lipopolysaccharide; *blood clotting factor 10; * blood clotting factor 7; *procoagulant;
*thromboplastin

CAS Registry Number: 9001-29-0 (blood clotting factor 10); 9001-25-6 (blood clotting factor 7); 9035-58-9 (thromboplastin); 128875-25-2 (endothelial leukocyte adhesion molecule 1); 126547-89...

7/3,K/19 (Item 4 from file: 73) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)

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05857092 EMBASE No: 1994273057

The role of human factor X activation peptide in activation of factor X by factor IXa

Iino M.; Takeya H.; Nishioka J.; Nakagaki T.; Tamura K.; Suzuki K.

Dept Molecular Biol Genetic Disease, Mie University School of Medicine, Tsu, Mie 514 Japan

Journal of Biochemistry (J. BIOCHEM.) (Japan) 1994 , 116/2 (335-340)

CODEN: JOBIA ISSN: 0021-924X

Document Type: Journal ; Article

Language: ENGLISH Summary Language: ENGLISH

The role of human factor X activation peptide in activation of factor X by factor IXa

We studied the interaction of factor X activation peptide (XAP) with factor IXa and factor Xa and the effect of XAP on factor IXa-catalyzed activation of factor X. XAP associated with factor Xa in the presence of 5 mM Casup 2sup + was dissociated from factor Xa by gel chromatography using Ultrogel AcA54 in 5 mM EDTA, or in 8 M urea-0.1% SDS. An exogenous isolated XAP inhibited the factor IXa-catalyzed factor X activation both in the presence and absence of factor VIIla. 4-Amidinophenylmethylsulfonyl (aPMS)-factor Xa independent of XAP also inhibited the factor X activation more effectively than XAP alone in the presence of factor VIIla. However, aPMS-factor Xa independent of XAP hardly inhibited the factor X activation in the absence of factor VIIla. The binding of sup 1sup 2sup 5I-labeled factor X to the aPMS-factor IXa fixed to a microwell plate was inhibited by unlabeled factor X or XAP, but not by aPMS- factor Xa with or without XAP. Factor IXa directly bound to XAP and aPMS-factor Xa with XAP, but did not bind to aPMS- factor Xa without XAP. These findings suggest that the region of XAP in factor X directly interacts with factor IXa, and factor Xa region other than XAP interacts with factor VIIla. Desialation or deletion of N-linked carbohydrates of XAP reduced the inhibitory activity of XAP for the factor X activation by factor IXa to approximately 50% of that of the intact XAP. This suggests that the sialic acids in the carbohydrate chains of the XAP region partly contribute to the interaction with factor IXa during its activation.

DRUG DESCRIPTORS:

* blood clotting factor 10--endogenous compound--ec; *blood clotting factor 9a--endogenous compound--ec
blood clotting factor 10a--endogenous compound--ec; blood clotting factor 8a; calcium ion;
carbohydrate--endogenous compound--ec; edetic acid; peptide--endogenous compound--ec; sialic acid...

CAS Registry Number: 9001-29-0 (blood clotting factor 10); 72162-96-0... ..9002-05-5 (blood clotting factor 10a); 14127-61-8 (calcium ion); 150-43-6...

7/3,K/20 (Item 5 from file: 73) [Links](#)

Fulltext available through: [ScienceDirect \(Elsevier\)](#) [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)
EMBASE

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04382970 EMBASE No: 1990271054

Lectin affinity chromatography of proteins bearing O-linked oligosaccharides: Application of jacalin-agarose

Hortin G.L.; Trimpe B.L.

Department of Pediatrics, Washington University School of Medicine, St. Louis, MO 63110 United States

Analytical Biochemistry (ANAL. BIOCHEM.) (United States) 1990 , 188/2 (271-277)

CODEN: ANBCA ISSN: 0003-2697

Document Type: Journal ; Article

Language: ENGLISH Summary Language: ENGLISH

...a variety of glycoproteins known to contain typical O-linked oligosaccharides, including human IgA, C1 inhibitor, chorionic gonadotropin, plasminogen, bovine protein Z, bovine coagulation factor X, and fetuin. These proteins were eluted from columns of jacalin-agarose specifically by alpha... ..deoxygalactopyranoside), in O-linked oligosaccharides of these proteins, was not prevented by the presence of sialic acids. Affinity of oligosaccharides for jacalin did appear to be reduced by occurrence of sialic acids as it was found that higher concentrations of melibiose were required to elute asialofetuin...

DRUG DESCRIPTORS:

blood clotting factor 10; chorionic gonadotropin; fetuin; immunoglobulin a

CAS Registry Number: 9001-29-0 (blood clotting factor 10); 9002-61-3 (chorionic gonadotropin)

7/3,K/21 (Item 6 from file: 73) [Links](#)

Fulltext available through: [ScienceDirect \(Elsevier\)](#) [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)
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03718711 EMBASE No: 1988168147

Microheterogeneity of plasma glycoproteins heparin cofactor II and antithrombin III and their carbohydrate analysis

Kim Y.-S.; Lee K.-B.; Linhardt R.J.

Division of Medicinal and Natural Products Chemistry, College of Pharmacy, University of Iowa, Iowa City, IA
52242 United States

Thrombosis Research (THROMB. RES.) (United States) 1988 , 51/1 (97-104)

CODEN: THBRA **ISSN:** 0049-3848

Document Type: Journal

Language: ENGLISH **Summary Language:** ENGLISH

Antithrombin III is the most important protease **inhibitor** in the blood coagulation cascade. Its activity results from the formation of covalent complexes with **Factor Xa** and thrombin (FIIa). The rate of this **inhibition** is accelerated up to 2,000-fold in the presence of catalyst, heparin. ATIII is... ..Heparin cofactor II (HCII) is also a glycoprotein, which is antigenically distinct from ATIII and **inhibits** only FIIa in the presence of heparin. Its carbohydrate structure and isoelectric point have not... ..microgram quantities of glycoprotein, to determine the concentration of each neutral sugar, amino sugar and **sialic acid** residue. The carbohydrate composition of ATIII and HCII are reported.

MEDICAL DESCRIPTORS:

* blood clotting

7/3,K/22 (Item 7 from file: 73) [Links](#)

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03285322 EMBASE No: 1986037899

Isolation and characterization of cancer procoagulant: A cysteine proteinase from malignant tissue

Falanga A.; Gordon S.G.

Department of Medicine, University of Colorado Health Sciences Center, Denver, CO 80262 United States

Biochemistry (BIOCHEMISTRY) (United States) 1985 , 24/20 (5558-5567)

CODEN: BICHA

Document Type: Journal

Language: ENGLISH

...000 and the isoelectric point 4.8. The proteinase activity of cancer procoagulant directly activated **factor X**, in the absence of **factor VII**, and was **inhibited** by 1 mM iodoacetamide and 0.1 mM mercury which are classic cysteine proteinase **inhibitors**. A carbohydrate analysis showed less than 1 mol of hexose or **sialic acid**/mol of protein. The amino acid analysis showed that serine (19.1%), glycine (18... ..amino acids. The amino acid composition of cancer procoagulant was substantially different than other known **factor X** activating proteinases or other cysteine proteinases including cathepsin B.

DRUG DESCRIPTORS:

* blood **clotting factor**; *cysteine proteinase; *procoagulant

amino acid; blood **clotting factor** 10; cathepsin b; glutamic acid; glycine; iodoacetamide; mercury; serine

CAS Registry Number: 37353-41-6 (cysteine proteinase); 65072-01-7 (amino acid); 9001-29-0 (blood **clotting factor** 10); 9047-22-7 (cathepsin b); 11070-68-1...

7/3,K/23 (Item 8 from file: 73) [Links](#)

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03250054 EMBASE No: 1986047631

Von Willebrand's disease with spontaneous platelet aggregation induced by an abnormal plasma von Willebrand factor

Gralnick H.R.; Williams S.B.; McKeown L.P.; et al.

Hematology Service, Clinical Pathology Department, Clinical Center, National Institutes of Health, Bethesda, MD 20205 United States

Journal of Clinical Investigation (J. CLIN. INVEST.) (United States) 1985 , 76/4 (1522-1529)

CODEN: JCINA

Document Type: Journal

Language: ENGLISH

Von Willebrand's disease with spontaneous platelet aggregation induced by an abnormal plasma von Willebrand factor

...platelet aggregation (RIPA) at low ristocetin concentrations, (b) absence of the largest plasma von Willebrand factor (vWf) multimers, and (c) thrombocytopenia. The platelet-rich plasma of these patients aggregates spontaneously without the... ..measured by ATP release and alpha granule release as measured by beta-thromboglobulin and platelet factor 4 release. The SPA is totally inhibited by 5 mM EDTA, prostaglandin Iinf 2, and dibutyl cyclic AMP, while it is only partially inhibited by 1 mM EDTA, acetylsalicylic acid, or apyrase. A monoclonal antibody directed against glycoprotein Ib (GPIb) and/or a monoclonal antibody against the glycoprotein IIb/IIIa (GPIIb/IIIa) complex totally inhibits the SPA. The vWf was isolated from the plasma of one of these patients. The purified vWf induced platelet aggregation of normal platelets resuspended in either normal or severe vWd plasma, but the vWf did not induce platelet aggregation of normal platelets resuspended in afibrinogenemic plasma. Sialic acid and galactose quantification of the patient's vWf revealed approximately a 50% reduction compared with normal vWf. These studies indicate that a form of vWd exists, which is characterized by SPA that is induced by the abnormal plasma vWf. The SPA is dependent on the presence of plasma fibrinogen, and the availability of the GPIb and the GPIIb/IIIa complex. In this variant form of vWd the abnormal vWf causes enhanced RIPA, SPA, and thrombocytopenia.

DRUG DESCRIPTORS:

* beta thromboglobulin; *blood clotting factor 8; *thrombocyte factor 4

CAS Registry Number: 66795-42-4 (beta thromboglobulin); 9001-27-8 (blood clotting factor 8); 37270-94-3...
...69670-74-2 (thrombocyte factor 4); 11006-74-9...

7/3,K/24 (Item 9 from file: 73) [Links](#)

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03003382 EMBASE No: 1985047348

Carbohydrate moiety of von Willebrand factor is not necessary for maintaining multimeric structure and ristocetin cofactor activity but protects from proteolytic degradation

Federici A.B.; Elder J.H.; De Marco L.; et al.

Department of Basic and Clinical Research, Scripps Clinic and Research Foundation, La Jolla, CA 92037 United States

Journal of Clinical Investigation (J. CLIN. INVEST.) (United States) 1984 , 74/6 (2049-2055)

CODEN: JCINA

Document Type: Journal

Language: ENGLISH

Carbohydrate moiety of von Willebrand factor is not necessary for maintaining multimeric structure and ristocetin cofactor activity but protects from proteolytic...

...define the role of carbohydrate in the structure and ristocetin cofactor activity of von Willebrand factor, we have removed up to 83% of total hexose by sequential treatment of the molecule... ..galactosidase. Endo F alone removed 69% of total hexose and D-galactose, and 71% of sialic acid. However, there was no discernible loss of large multimers and the ristocetin cofactor activity was decreased by only 11%. The reduced von Willebrand factor subunit migrated more rapidly in polyacrylamide gels containing SDS, consistent with a 10% decrease of molecular mass. All multimers of unreduced carbohydrate-modified von Willebrand factor migrated more rapidly in SDS-agarose, but the triplet pattern of individual multimers was unchanged... ..resemble alterations found so far in von Willebrand disease variants. Further treatment of von Willebrand factor with neuraminidase and beta-galactosidase reduced the D-galactose to 15% and ristocetin cofactor activity to 57%. A similar decrease in ristocetin cofactor activity was seen if von Willebrand factor was treated only with neuraminidase and beta-galactosidase. In contrast, treating von Willebrand factor with neuraminidase and beta-galactosidase in the presence of protease inhibitors (20 mM benzamidine, 20 U/ml) aprotonin, 15 mug/ml leupeptin) resulted in a comparable... ..spite of 80% removal of D-galactose. This suggested that carbohydrate was protecting von Willebrand factor against traces of one or more protease contaminants. Evidence in support of this hypothesis was obtained by exposing von Willebrand factor to plasmin after pretreatment with neuraminidase alone or with neuraminidase and beta-galactosidase. A loss of large multimers was observed from von Willebrand factor that had been pretreated with neuraminidase, but this was even greater if pretreatment was also with beta-galactosidase. In contrast, the multimeric structure of von Willebrand factor with intact carbohydrate was not affected by plasmin under similar conditions. These studies suggest that carbohydrate protects von Willebrand factor from disaggregation occurring secondarily to proteolytic attack but does not play a direct role in...

DRUG DESCRIPTORS:

* blood clotting factor 8; *carbohydrate

CAS Registry Number: 9001-27-8 (blood clotting factor 8); 9001-67-6 (sialidase); 11006-74-9...

7/3,K/25 (Item 10 from file: 73) [Links](#)

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02726047 EMBASE No: 1984095006

Blood clotting factor IX. Loss of activity after cleavage of sialic acid residues

Chavin S.I.; Weidner S.M.

Hematology Unit, Rochester General Hospital, Rochester, NY 14621 United States

Journal of Biological Chemistry (J. BIOL. CHEM.) (United States) 1984 , 259/6 (3387-3390)

CODEN: JBCHA

Document Type: Journal

Language: ENGLISH

Blood clotting factor IX. Loss of activity after cleavage of sialic acid residues

Enzymatic cleavage of sialic acid from human blood clotting factor IX results in a loss of factor IX clotting activity. The loss of clotting activity and the rate of release of sialic acid follow the same time courses. Control experiments have ruled out several explanations for the loss of factor IX activity: proteolytic degradation, inhibitory effects of free sialic acid, and non-specific inhibition of the clotting assays. Furthermore, no inhibition was seen when similar enzymatic cleavage was carried out on factor X and factor VIII. Therefore, we suggest that the loss of factor IX activity is the direct result of cleavage of sialic acid from the protein. Most of the inhibition appeared to be an effect on the activity of factor IX(a) itself, and thus far, little or no effect has been shown on the activation of factor IX to IX(a). The structural basis for this unusual effect of sialic acid on protein function currently is being investigated.

DRUG DESCRIPTORS:

* blood clotting factor 9; *sialic acid

CAS Registry Number: 9001-28-9 (blood clotting factor 9)

7/3,K/26 (Item 11 from file: 73) [Links](#)

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02086015 EMBASE No: 1982189109

Effects of galactose-binding lectins on human blood platelets: Identity of the peanut agglutinin receptor with the Von Willebrand factor receptor

Naim H.Y.; Clemetson K.J.; Luscher E.F.

Theodor Kocher Inst., Univ. Berne, CH-3000 Bern 9 Switzerland

Thrombosis Research (THROMB. RES.) (United States) 1982 , 26/6 (431-441)

CODEN: THBRA

Document Type: Journal

Language: ENGLISH

...lectins on human blood platelets: Identity of the peanut agglutinin receptor with the Von Willebrand factor receptor

...were treated with neuroaminidase and resuspended in platelet-poor plasma, source of human von Willebrand factor (vWF) (denoted desialo-platelets). Peanut agglutinin (PNA), soybean agglutinin (SBA) and Ricinus communis agglutinin (RCAI) induced... ..of desialo-platelets down to concentrations of 25 mug/ml. Agglutination of platelets by ristocetin/vWF was not affected by removal of the terminal sialic acid. In subagglutinating concentrations, PNA inhibited the ristocetin-induced agglutination of desialo-platelets whereas SBA and RCAI were without effect. When... ..was greatly impaired, SBA and RCAI reacted normally. These results indicate that PNA and ristocetin/vWF compete in binding to the same receptor. Since asialoglycoprotein Ib was shown earlier to be... ..a PNA-Sepharose affinity column these results provide further evidence that glycoprotein Ib is the vWF receptor on human platelets and that the carbohydrate-rich outer part of glycoprotein Ib is...

DRUG DESCRIPTORS:

* blood clotting factor 8; *peanut agglutinin

CAS Registry Number: 9001-27-8 (blood clotting factor 8)

7/3,K/27 (Item 12 from file: 73) [Links](#)

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02028743 EMBASE No: 1981015918

Studies on factor VIII-related protein. IV. Interaction of galactose-specific lectins with human factor VIII/Von Willebrand factor

Furlan M.; Perret B.A.; Beck E.A.

Cent. Hematol. Lab., Inselsp., 3010 Berne Switzerland

Biochimica et Biophysica Acta (BIOCHIM. BIOPHYS. ACTA) (Netherlands) 1980 , 623/2 (402-411)

CODEN: BBACA

Document Type: Journal

Language: ENGLISH

Studies on factor VIII-related protein. IV. Interaction of galactose-specific lectins with human factor VIII/Von Willebrand factor

Factor VIII of human cryoprecipitate was purified and fractionated on Sepharose CL-2B into three fractions... ..and RCA(II)). Measurements of fluorescence indicated that the reduced chains, derived from the largest factor VIII multimers, have a stronger binding affinity for both lectins than those obtained after reduction of smaller factor VIII species. Ristocetin cofactor activity of purified factor VIII was competitively inhibited by both Ricinus lectins and by concanavalin A. RCA(I)-lectin was found to be a considerably more efficient inhibitor than RCA(II) or concanavalin A. Following removal of sialic acid from factor VIII, the inhibiting effect of RCA(II)-lectin was markedly potentiated, probably by exposing additional galactose residues, some of which must be located close to the ristocetin cofactor 'active site' of factor VIII. Ristocetin cofactor activity was also strongly inhibited by specific rabbit antibodies to human factor VIII. Such antibodies competed with RCA(II)-lectin for binding sites which are located on the surface of factor VIII multimers. Our results suggest that RCA(I)-lectin, which contains two galactose-specific binding sites per molecule, and anti-factor VIII antibodies inhibit ristocetin cofactor activity by crosslinking and aggregation of factor VIII multimers.

DRUG DESCRIPTORS:

* blood clotting factor 8; *galactose; *phytohemagglutinin

CAS Registry Number: 9001-27-8 (blood clotting factor 8); 26566-61-0...

7/3,K/28 (Item 13 from file: 73) [Links](#)

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01828656 EMBASE No: 1981199812

Properties of human asialo-factor VIII. A ristocetin-independent platelet-aggregating agent

De Marco L.; Shapiro S.S.

Cardeza Found. Hematol. Res., Dept. Med., Jefferson Med. Coll. Thomas Jefferson Univ., Philadelphia, Pa. 19107
United States

Journal of Clinical Investigation (J. CLIN. INVEST.) (United States) 1981 , 68/2 (321-328)

CODEN: JCINA

Document Type: Journal

Language: ENGLISH

Properties of human asialo-factor VIII. A ristocetin-independent platelet-aggregating agent

Human Factor VIII desialylated by treatment with *Vibrio cholerae* neuraminidase (ASVIII) aggregates human platelets in the absence... ..lesser extent, in washed platelet suspensions. Aggregation is accompanied by thromboxane formation and is completely inhibited by EDTA. Aspirin blocks the second phase of aggregation and abolishes thromboxane production. Subaggregating doses... ..either did not aggregate with ASVIII (two cases) or showed markedly decreased aggregation (one case). Factor VIII complex was prepared from the plasma of two patients with variant von Willebrand's disease (sialic acid content 142 and 75 nmol/mg, respectively); neither protein generated platelet-aggregating activity upon desialylation. (sup 3H)ASVIII binds rapidly to platelets at 37degreeC, while tritiated, fully sialylated factor VIII binds to a negligible extent. As little as 1-2 mug ASVIII bound/10sup... ..is capable of inducing platelet aggregation. ASVIII may be a useful tool for investigating platelet-Factor VIII interactions in the absence of ristocetin. Furthermore, desialylated Factor VIII might play a physiologic role in Factor VIII-mediated platelet reactions in vivo.

DRUG DESCRIPTORS:

* acetylsalicylic acid; *blood clotting factor 8; *edetate acid; *sialidase; *ristocetin

CAS Registry Number: ...63781-77-1 (acetylsalicylic acid); 9001-27-8 (blood clotting factor 8); 150-43-6...

7/3,K/29 (Item 14 from file: 73) [Links](#)

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01697299 EMBASE No: 1980065493

Carbohydrate composition and identification of blood group A, B, and H oligosaccharide structures on human factor VIII/Von Willebrand factor

Sodetz J.M.; Paulson J.C.; McKee P.A.

Howard Hughes Med. Inst. Lab., Dept. Med., Duke Univ. Med. Cent., Durham, N.C. 27710 United States

Journal of Biological Chemistry (J. BIOL. CHEM.) (United States) 1979 , 254/21 (10754-10760)

CODEN: JBCHA

Document Type: Journal

Language: ENGLISH

Carbohydrate composition and identification of blood group A, B, and H oligosaccharide structures on human factor VIII/Von Willebrand factor

Human Factor VIII/von Willebrand Factor purified from pooled normal plasma contains 3.7% sialic acid, 2.4% galactose, 4.0% N-acetylglucosamine, 3.2% mannose, 1.0% fucose, and 0.7% N-acetylgalactosamine. By hemagglutination inhibition, it was demonstrated that type A, B, and O(H) blood group activities are associated with this glycoprotein. Type A blood group activity of both Factor VIII/von Willebrand Factor and asialo-porcine submaxillary mucin was significantly reduced by incubation with the limpet alpha-N... ..blood group acceptors. By measurement of the amount of (sup 1sup 4C)GalNAc incorporated into Factor VIII/von Willebrand Factor before and after N-acetylgalactosaminidase treatment, the content of type A and H blood group... ..protein was confirmed by both lipid extraction and polyacrylamide gel experiments using N-acetylgalactosaminidase-treated Factor VIII/von Willebrand Factor which had (sup 1sup 4C)GalNAc reincorporated into it. Treatment of this derivative with partially... ..corresponding to type A and H blood group active structures, respectively, are present on normal Factor VIII/von Willebrand protein in a beta1 <rt arrow> 4 linkage to the penultimate sugar... ..may bear on the recognized tendency for some hemophilic patients to develop antibodies toward FVIII/vWF following repeated infusions of FVIII/vWF pooled concentrations.

DRUG DESCRIPTORS:

* blood clotting factor 8

CAS Registry Number: 9001-27-8 (blood clotting factor 8)

7/3,K/30 (Item 15 from file: 73) [Links](#)

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01392207 EMBASE No: 1979112977

Activation of factor X by factors IXa and VIII; A specific assay for factor IXa in the presence of thrombin-activated factor VIII

Hultin M.B.; Nemerson Y.

Div. Hematol., Dept. Med., State Univ. New York, Stony Brook, N.Y. United States

Blood (BLOOD) (United States) 1978 , 52/5 (928-940)

CODEN: BLOOA

Document Type: Journal

Language: ENGLISH

Activation of factor X by factors IXa and VIII; A specific assay for factor IXa in the presence of thrombin-activated factor VIII

The authors studied the activation of factor X by the intrinsic pathway of blood coagulation using a new assay of factor X activation. When factor X tritiated in its sialic acid residues is activated, activation can be measured by the release of tritiated activation peptide... ..activation can be determined under varying conditions. In the presence of phospholipid and calcium ions, factor IXa activated factor X slowly without factor VIII, and this activation was blocked by a specific factor IX inhibitor. These data provide strong evidence that factor IXa is the enzyme responsible for factor X activation by the intrinsic pathway. The role of factor VIII was also investigated. Factor VIII could be reproducibly thrombin activated and then stabilized by the addition of mM benzamidine hydrochloride; this suggests that inactivation is due to proteolysis. Neither unactivated nor thrombin-activated factor VIII produced factor X activation without factor IXa. With a constant level of factor IXa, factor X activation was directly proportional to the level of activated factor VIII. With a constant level of activated factor VIII, factor X activation was proportional to the factor IXa concentration. This observation was exploited to develop a specific, sensitive assay for factor IXa.

DRUG DESCRIPTORS:

* blood clotting factor

7/3,K/31 (Item 16 from file: 73) Links

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00560463 EMBASE No: 1976116087

The interaction of bovine factor VIII with human platelets

Kirby E.P.; Mills D.C.B.

Dept. Biochem., Temple Univ. Hlth Sci. Cent., Philadelphia, Pa. 19140 United States

Journal of Clinical Investigation (J. CLIN. INVEST.) 1975 , 56/2 (491-502)

CODEN: JCINA

Document Type: Journal

Language: ENGLISH

The interaction of bovine factor VIII with human platelets

Treatment of human platelets with purified bovine Factor VIII caused three types of aggregation: (a) primary agglutination; (b) secondary aggregation involving the platelet... ..with formalin were not aggregated by ADP, thrombin, or collagen, but were agglutinated by bovine Factor VIII, although they did not show super aggregation. Formalin treated platelets were agglutinated by phytohemagglutinin P less extensively and less rapidly than by bovine Factor VIII. Treatment of platelets and Factor VIII with neuraminidase released 60 and 53%, respectively, of the sialic acid residues without affecting the agglutination reaction or the procoagulant activity of the Factor VIII. Agglutination was inhibited by high salt concentrations, dextran sulfate, and heparin. During agglutination, both the procoagulant and platelet agglutinating activities of Factor VIII became bound to the platelet surface.

DRUG DESCRIPTORS:

* adenosine diphosphate; *agarose; *antimycin a1; *blood clotting factor; *blood clotting factor 8; *collagen; *dextran sulfate; *heparin; *sialidase; *phytohemagglutinin; *polylysine; *serotonin ; *sialic acid; *thrombin

MEDICAL DESCRIPTORS:

* antigen antibody reaction; *blood clotting; *cattle; *drug inhibition; *human; *thrombocyte; *thrombocyte aggregation; *thrombocyte release reaction

CAS Registry Number: ...642-15-9 (antimycin a1); 9001-27-8 (blood clotting factor 8); 9007-34-5 (collagen); 9011-18-1...

7/3,K/32 (Item 17 from file: 73) [Links](#)

EMBASE

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00096680 EMBASE No: 1974086774

Aggregation of human platelets by bovine or human factor VIII: role of carbohydrate side chains

Vermeylen J.; Donati M.B.; De Gaetano G.; Verstraete M.

Lab. Blood Coagulat., Med. Res. Dept., Univ. Leuven Belgium

Nature (NATURE) 1973 , 244/5412 (167-168)

CODEN: NATUA

Document Type: Journal

Language: ENGLISH

Aggregation of human platelets by bovine or human factor VIII: role of carbohydrate side chains

Bovine factor VIII has been shown to aggregate human platelets. The present study suggests that this action is dependent on the carbohydrate side chains containing galactose, but not terminated by sialic acid, found in bovine factor VIII. These side chains bind with sialyl transferase located on the platelet membrane and form a substrate - enzyme complex, presumably just as collagen and platelets interact to produce platelet aggregation. Exposure of bovine factor VIII to galactose oxidase abolished the aggregating property. Human factor VIII does not aggregate platelets, unless preincubated with neuraminidase, thereby exposing galactose containing side chains not terminated by sialic acid. Exposure to galactose oxidase also inhibits this reaction. The authors suggest that the defective platelet adhesiveness of Von Willebrand's disease may be related to the lack of available factor VIII seen in this disease. (Slyck - Detroit, Mich.)

DRUG DESCRIPTORS:

* blood clotting factor 8

CAS Registry Number: 9001-27-8 (blood clotting factor 8)

7/3,K/33 (Item 1 from file: 266) [Links](#)

FEDRIP

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00609872

Identifying No.: 5R01HL078679-02 **Agency Code:** CRISP

Inhibition of leukocyte C2GlcNAcT--I reduces thrombosis

Principal Investigator: HUO, YUQING

Address: YUQING@UMN.EDU CARDIOVASC DIV & VASC BIO CTR 420 DELAWARE ST SE, MMC 508
MINNEAPOLIS, MN 55455

Performing Org.: UNIVERSITY OF MINNESOTA TWIN CITIES , MINNEAPOLIS , MINNESOTA

Sponsoring Org.: NATIONAL HEART, LUNG, AND BLOOD INSTITUTE

Dates: 2009/26/04 To 2008/31/08 **Fy :** 2005

Summary: ...selectin glycoprotein ligand-1 (PSGL-1) participate in a variety of thrombotic processes including tissue **factor** (TF) generation and transfer. PSGL-1 has a specific "O-linked" oligosaccharide terminating with a **sialyl** Lewis-X moiety, which is crucial for its binding to P-selectin. Leukocyte core 2... ..study, we have found that deficiency of C2GlcNAcT-I in C57BL/6 mice prolongs plasma **clotting** time and **inhibits** thrombus formation. We hypothesize that leukocyte C2GlcNAcT-I is involved in monocytic tissue **factor** (TF) production and homing of circulating TF-carrying microparticles (MPs) to thrombi in **atherosclerotic** mice. Deficiency of leukocyte C2GlcNAcT-I or **inhibition** of its activity results in amelioration of the procoagulant state and suppression of thrombus formation in apolipoprotein E deficient (apoE^{-/-}) mice. **Inhibition** of C2GlcNAcT-I may be a novel approach for preventive and therapeutic interventions in arterial thrombosis in **atherosclerosis**.

Descriptors: laboratory mouse; genetically modified animal; thromboplastin; platelet activation; **atherosclerosis**; thrombosis; cell migration; flow cytometry; carotid artery; polymerase chain reaction; enzyme inhibitor; gene expression; glycosyltransferase...

7/3,K/34 (Item 1 from file: 357) [Links](#)

Derwent Biotech Res.

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0382019 DBA Accession No.: 2005-27725 PATENT

Determining response to the pharmaceutical agent for hypertension comprises analyzing test samples for the presence or amount of specific markers for cardiovascular illness or hypertension treatment pharmaceutical agent response determination and antisense sequence for use in disease therapy and gene therapy

Author: DIAMOND C; MAN A; BREMER T

Patent Assignee: DIAMOND C; MAN A; BREMER T 2005

Patent Number: US 20050181386 **Patent Date:** 20050818 **WPI Accession No.:** 2005-655559 (200567)

Priority Application Number: US 948834 **Application Date:** 20040922

National Application Number: US 948834 **Application Date:** 20040922

Language: English

Abstract: ...mutant messenger RNA, the antisense or small interfering RNA sequences adapted to bind to and inhibit transcription or translation of the target genes without preventing transcription or translation of wild-type ... regressor. The anti-hypertensive medication belongs to the class known as angiotensin converting enzyme (ACE) inhibitors. It is the molecule monopril or lisinopril. At least one mutation is a silent mutation ... I and cardiac troponin T. Alternatively, the diagnostic outcome is that of determining risk of atherosclerotic plaque rupture, where the proteomic markers are selected from 2 or more of human neutrophil... selected from 2 or more of beta-thromboglobulin, D-dimer, fibrinopeptide A, platelet-derived growth factor, plasmin-alpha-2-antiplasmin complex, platelet factor 4, prothrombin fragment 1+2, P-selectin, thrombin-antithrombin III complex, thrombus precursor protein, tissue factor, and von Willebrand factor. Alternatively, the diagnostic outcome is that of determining risk of acute coronary syndrome, where the... heart-type fatty acid binding protein, phosphoglyceric acid mutase-MB, S-100ao, a marker of atherosclerotic plaque rupture, a marker of coagulation, C-reactive protein, caspase-3, hemoglobin alpha sub2, human... adhesion molecule-1, soluble vascular cell adhesion molecule-1, MMP-9, TpP, and tumor necrosis factor alpha. Alternatively, the diagnostic outcome is that of determining risk of myocardial necrosis, where the... Cellular-Fibronectin, apolipoprotein CI (ApoC-I), apolipoprotein CIII (ApoC-III), serum amyloid A (SM), Platelet factor 4 (PF4), anti-thrombin-III fragment (AT-III fragment), Creatine kinase (CK-BB), troponin, BDNF, CPK, LDH Isoenzymes, Thrombin-Antithrombin III, Protein C, Protein S, fibrinogen, Factor VIII, activated Protein C resistance, E-selectin, P-selectin, von Willebrand factor (vWF), platelet-derived microvesicles (PDM), plasminogen activator inhibitor-1 (PAI-1), annexin V, B-type natriuretic peptide (BNP), pro-BNP, N-terminal pro... FABP), phosphoglyceric acid mutase-MB, S-100beta, S-100ao, myelin basic protein, a marker of atherosclerotic plaque rupture, a marker of coagulation, NR2A/2B (a subtype of N-methyl-D-aspartate... molecule-1, soluble vascular cell adhesion molecule-1, MMP-2, MMP-3, MMP-9, tissue factor (TF), fibrin D-dimer (D-dimer), total sialic acid (TSA), TpP, heat shock protein 60, and tumor necrosis factor alpha, tumor necrosis factor receptors 1 and 2, VEGF, Calbindin-D, Proteolipid protein RU Malendialdehyde neuron-specific enolase (NSE) (gammagamma isoform), Fibrinopeptide A (FPA), plasmin-alpha-2AP complex (PAP), also plasmin inhibitory complex (PIC), beta-thromboglobulin (betaTG), Prothrombin fragment 1+2, PGI2, Creatinine phosphokinase, brain band, neurotrophin... 4/5), neurokinin A, neurokinin B, neurotensin, neuropeptide Y, Lactate dehydrogenase (LDH), Insulin-like growth factor-1 (IGF-1), PGE2, 8-epi PGF-sub-2alpha, and Transforming growth factor beta (TGFbeta). The proteomic markers are comprised of a panel of about 3, 4, 5... 9 or TAT; TAT; IL-8 or IL-1b; D-Dimer or VCAM; VCAM; BNP, vWF, IL-6 or Caspase 3, NCAM or IL-1, etc. The non-proteomic markers are...

7/3,K/35 (Item 2 from file: 357) Links

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0334524 DBA Accession No.: 2004-06816 PATENT

Preparation useful for treating Factor VII responsive syndrome such as hemophilia, comprising several Factor VII polypeptides or Factor VII-related polypeptides involving vector-mediated gene transfer and expression in host cell for use in therapy

Author: KLAUSEN N K; BJORN S; BEHRENS C; GARIBAY P W

Patent Assignee: NOVO NORDISK AS 2003

Patent Number: WO 200400366 **Patent Date:** 20031231 **WPI Accession No.:** 2004-090926 (200409)

Priority Application Number: US 394778 **Application Date:** 20020701

National Application Number: WO 2003DK420 **Application Date:** 20030620

Language: English

Preparation useful for treating Factor VII responsive syndrome such as hemophilia, comprising several Factor VII polypeptides or Factor VII-related polypeptides involving vector-mediated gene transfer and expression in host cell for use...

Abstract: DERWENT ABSTRACT: NOVELTY - Preparation (I) comprising several Factor VII polypeptides (II) or Factor VII-related polypeptides (III) having asparagine-linked and/or serine-linked oligosaccharide chains, where an... ..of the half-life of the reference preparation. The polymeric group is attached to a sialic acid moiety, where 98-100, 96-100 or 94-100 % of the oligosaccharide chains comprise a sialic acid moiety and less than 25, 10 or preferably 2 % of the oligosaccharide chains contain... ..residues Asn at position 145 and Asn at position 322 of wild-type activated human Factor VII comprising a 406 amino acid sequence (S1), given in the specification. The serine-linked... ..to amino acid residues Ser at positions 52 and 60 of wild-type activated human Factor VII. The polymers are chosen from polyalkylene oxide (PAO), including polyalkylene glycol (PAG), such as... ..or 10 kDa. (II) or (III) has (S1) and is a plasma-derived human activated Factor VII. (II) is chosen from S52A-Factor VII, S60A-Factor VII, Factor VII that has been proteolytically cleaved between residues 290 and 291, or between residues 315 and 316, Factor VII that has been oxidized, L305V-FVII, L305V/M306D/D309S-FVII, L305I-FVII, L305T-FVII... ..FVII, V158D/E296V/M298Q-FVII, K337A-FVII, M298Q-FVII, V158D/M298Q-FVII, L305V/K337A-FVII, Factor VII-sequence variants, where the amino acid residue at positions 290 and/or 291, preferably 290, have been replaced, and Factor VII-sequence variants, where the amino acid residue at position 315 and/or 316, preferably... ..E296V-FVII, L305V/K337A/V158D-FVII, L305V/V158D/M298Q-FVII, L305V/V158D/E296V-FVII or Factor VII having substitutions, additions or deletions in the amino acid sequence from Thr at position... ..and Ile at position 153 to Arg at position 223. (II) is chosen from R152E-Factor VII, S344A-Factor VII, FFR-Factor VII, and Factor VII (activated) lacking the Gla domain. (III) exhibits 25, preferably 50, more preferably 75 and most preferably 90 % of the specific activity of wild-type Factor VII (activated) that has been produced in the same cell type, when tested in one or more of a clotting assay, proteolysis assay, or TF binding assay or (III) exhibits 25, preferably less than 10... ..than 5 and most preferably less than 1 % of the specific activity of wild-type Factor VII (activated). **ACTIVITY** - Hemostatic; Tranquilizer; Vulnerary; Cerebroprotective; Anticoagulant; Cardiant; Antiinflammatory; Cytostatic. No biological data is... ..**MECHANISM OF ACTION** - None given. **USE** - (I) is useful for preparing a medicament for treating Factor VII responsive syndrome, for preventing unwanted bleeding or for preventing tissue factor mediated reactions. (I) is useful for preparing (IV) which is useful for treating a Factor VII-responsive syndrome which involves administering (IV) to a patient in need of the treatment under conditions that result in a decrease in bleeding and/or an increase in blood clotting, where the syndrome is chosen from hemophilia A, hemophilia B, Factor XI deficiency, Factor VII deficiency, thrombocytopenia, von Willebrand's disease, presence of a clotting

factor inhibitor, surgery, trauma, and anticoagulant therapy, including dilutional coagulopathy, intracranial hemorrhage, stem cell transplantation, upper gastrointestinal bleedings and liver disease. (IV) is useful for preventing unwanted bleeding, unwanted blood clotting or tissue factor mediated reactions, which involves administering (IV) to a patient in need of the treatment under conditions that result in a decrease in bleeding and/or an increase in blood clotting or under conditions effective for inhibiting coagulation, where (IV) comprises (III) for preventing tissue factor mediated reactions. The unwanted blood clotting is associated with a condition chosen from angioplasty, deep vein thrombosis, pulmonary embolism, stroke, disseminated ...deposition in lungs and kidneys associated with Gram-negative endotoxemia, and myocardial infarction. The tissue factor mediated reactions are associated with a condition chosen from inflammation, cancer, tumor growth, metastasis, angiogenesis...

Descriptors: recombinant Factor-VII prep., isol., vector-mediated gene transfer, expression in host cell, appl. cancer, inflammation, hemopathy, vulnerary, cardiovascular disorder therapy blood-clotting protein tumor (23, 13)

7/3,K/36 (Item 3 from file: 357) [Links](#)

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0292853 DBA Accession No.: 2002-14700 PATENT

Pharmaceutical composition for treatment or prophylaxis of atherosclerosis comprises human or recombinant human complement proteins e.g., mannose-binding lectins, C4A, C4B, C2, vitronectin, clusterin vector-mediated gene transfer and expression in host cell for recombinant protein production, vaccine and gene therapy

Author: CABEZAS M C; VAN DIJK H

Patent Assignee: UNIV UTRECHT MEDISCH CENT 2002

Patent Number: EP 1186299 **Patent Date:** 20020313 **WPI Accession No.:** 2002-282869 (200233)

Priority Application Number: EP 2000203156 **Application Date:** 20000912

National Application Number: EP 2000203156 **Application Date:** 20000912

Language: English

Pharmaceutical composition for treatment or prophylaxis of atherosclerosis comprises human or recombinant human complement proteins e.g., mannose-binding lectins, C4A, C4B, C2...

Abstract: DERWENT ABSTRACT: NOVELTY - Pharmaceutical composition for the treatment/prophylaxis of atherosclerosis or underlying and/or related disease, comprising human or recombinant human complement protein (I) or... ..or fragments of (I), is new. DETAILED DESCRIPTION - Pharmaceutical composition for the treatment/prophylaxis of atherosclerosis or underlying and/or related disease, comprising human or recombinant human complement protein e.g... ..included for the following: (1) use of at least one complement activator and/or complement inhibitor for the manufacture of a medicament for the treatment and/or prevention of atherosclerosis or underlying/related disease; (2) an in-vitro assay for the estimation of complement activation... ..or (semi)synthetic substances as a parameter of their anti-atherogenic potential; (3) diagnosing (M1) atherosclerosis or underlying or related disease by carrying out an assay for at least one activatory or regulatory complement component; (4) kit for diagnosing atherosclerosis or underlying/related disease by (M1), comprising an unit for carrying out an assay for at least one natural activatory or inhibitory complement component; (5) use of lipidated vaccine (II) for oral immunization; (6) use of whole... ..the lectin complement activation pathway. (I) also comprises one or more soluble or liquidated complement inhibitors of natural or (semi)synthetic origin (e.g., sialylated glycolipids). The natural or (semi)synthetic complement activator or complement inhibitor has been produced by combinatorial strategies or by in vivo generation. (I) further comprises a... ..B(apo B48, apo B100, or both), mannose-binding lectin (MBL), C4, C4A, C4B, C2, factor B, factor D, vitronectin, clusterin, erythrocyte-bound complement receptor 1 (CR1), C3adesArg, carboxypeptidase-N, or chylomicron-bound sialic acid. Preferred Vaccine: (II) comprises one or more immunological adjuvant such as lipidated tertiary or... ..regulator of chylomicron remnants clearance. USE - The pharmaceutical composition is useful for treating or preventing atherosclerosis or underlying/related disease (claimed). The pharmaceutical composition is also useful for treating insulin resistance...

Descriptors: ...gene transfer, expression in host cell, polyclonal antibody, humanized antibody, monoclonal antibody, appl. recombinant vaccine, atherosclerosis, insulin resistance, type-II diabetes mellitus, obesity, coronary heart disease, familial combined hyperlipidemia, post-prandial...

7/3,K/37 (Item 4 from file: 357) [Links](#)

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0290991 DBA Accession No.: 2002-12838 PATENT

Novel preparation of Factor VII polypeptides, useful for treating hemophilia and thrombocytopenia, where the polypeptides have asparagine-lined oligosaccharide chains vector expression in host cell for recombinant protein gene production useful in disease therapy

Author: PINGEL H K; KLAUSEN N K

Patent Assignee: NOVO NORDISK AS 2002

Patent Number: WO 200229025 **Patent Date:** 20020411 **WPI Accession No.:** 2002-340101 (200237)

Priority Application Number: DK 2001751 **Application Date:** 20010514

National Application Number: WO 2001DK633 **Application Date:** 20011002

Language: English

Novel preparation of Factor VII polypeptides, useful for treating hemophilia and thrombocytopenia, where the polypeptides have asparagine-lined oligosaccharide...

Abstract: DERWENT ABSTRACT: NOVELTY - A preparation of Factor VII, or related, polypeptides, is new. The polypeptides comprise asparagine-linked oligosaccharide chains, where 94-99 % have a sialic moiety, 1-7 % have a neutral charge, 6-16 % have a terminal galactose, 6-9... ..acetylglucosamine.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following: (1) a

preparation comprising Factor VII polypeptides, comprising asparagines-linked oligosaccharide chains, where 94-100 % of the chains have at least one sialic moiety, and 6-9 % have a terminal

N-acetylgalactosamine; (2) a preparation comprising Factor VII polypeptides having wild-type Factor VII sequence, where the polypeptides comprise asparagine-linked chains, 94-99 % of which have a sialic acid

residue; (3) determining the glycoform pattern of Factor VII, comprising: (a) culturing a cell expressing Factor VII; (b) recovering the Factor VII from the culture; and (c) analyzing the structure of the

oligosaccharides linked to the polypeptides to determine the glycoform pattern of the preparation; and (4) producing a preparation comprising Factor VII polypeptide having a predetermined pattern of N-linked

glycosylation, comprising culturing a cell expressing... ..conditions so that at least 94 % of the

asparagine-linked oligosaccharides comprise at least one sialic acid. **ACTIVITY** - Hemostatic; Vulnerary; Anticoagulant; Thrombolytic; Cerebroprotective. No biological data is given. **MECHANISM OF ACTION** -

None given. **USE** - For treating hemophilia A, hemophilia B, Factor XI deficiency, Factor VII deficiency, thrombocytopenia, von Willebrand's disease, presence of a clotting factor inhibitor, surgery, trauma, or

anticoagulant therapy. The preparation can also be used to prevent unwanted bleeding. Where the

preparation comprise Factor VII-related polypeptides, it can be used to prevent unwanted blood clotting associated with angioplasty, deep vein thrombosis, pulmonary embolism, stroke, disseminated intravascular

coagulation, fibrin deposition in... ..gram-negative endotoxemia and myocardial infarction. The preparation can also be used in preventing tissue factor mediated reactions associated with systemic inflammatory

response syndrome (SIRS), adult respiratory distress syndrome (ARDS), MOF... ..1.0-200 mg/day.

EXAMPLE - A baby hamster kidney cell line transformed with a Factor VII-encoding plasmid was adapted to growth in suspension culture in the absence of serum... ..3-6x10 to the power 6 cells/ml and a titer of 2-7

mg Factor VII/liter. (35 pages)

Descriptors: Factor-VII protein prep., vector-mediated gene transfer expression in BHK, CHO, HEK human cell, asparagine-like oligosaccharide chain, appl. hemophilia A, hemophilia B, Factor XI deficiency, Factor

VII deficiency, thrombocytopenia, von Willebrand disease, clotting factor inhibitor presence, surgery, trauma, angioplasty, deep vein thrombosis, pulmonary embolism, stroke, disseminated intravascular

coagulation, fibrin... ..associated Gram-neg. endotoxemia, myocardial infarction, anticoagulant, unwanted

bleeding, systemic inflammatory response syndrome associated tissue factor mediated reaction, respiratory distress syndrome, hemolytic uremic syndrome blood-clotting protein animal baby hamster kidney mammal cell culture Chinese hamster ovary human embryo kidney hemostatic...

7/3,K/38 (Item 5 from file: 357) [Links](#)

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0268724 DBA Accession No.: 2001-09030 PATENT

Modulating levels of von Willebrand factor or Factor-VIII in animals for preventing or treating atherosclerosis and blood clotting disorders, comprises administering an agent that modulates ST3Gal-IV-sialyltransferase activity
- antisense oligonucleotide for use in therapy

Author: Marth J D; Ellies L G

Corporate Source: San Diego, CA, USA.

Patent Assignee: Univ.California 2001

Patent Number: WO 200122921 **Patent Date:** 20010405 **WPI Accession No.:** 2001-258082 (2026)

Priority Application Number: US 157220 **Application Date:** 19990930

National Application Number: WO 2000US26550 **Application Date:** 20000927

Language: English

Modulating levels of von Willebrand factor or Factor-VIII in animals for preventing or treating atherosclerosis and blood clotting disorders, comprises administering an agent that modulates ST3Gal-IV-sialyltransferase activity

Abstract: Modulating (I) levels of von Willebrand factor (vWF) or Factor-VIII in an animal is claimed and involves administering to the animal an agent (e.g. antisense sequence hybridizing to ST3Gal-IV sialyltransferase encoding sequence) that causes an increase or decrease in ST3Gal-IV sialyltransferase activity. Also claimed are: monitoring (II) the efficacy of a method for inhibiting ST3Gal-IV in a mammal comprising testing cells obtained from the mammal for the presence or absence of a cell-surface oligosaccharide having a terminal alpha-2,3-linked sialic acid, where the absence of the terminal alpha-2,3-linked sialic acid is indicative of an inhibition of ST3Gal-IV inhibition; a eukaryotic cell that comprises non-naturally occurring mutation in an ST3Gal-IV allele; and a non-human chimeric or transgenic animal that comprises the eukaryotic cell. Modulating levels of vWF and Factor-VIII is used for therapy and prevention of atherosclerosis associated with coronary artery disease or peripheral vascular disease in an animal and for ameliorating blood clotting caused by side effect of drugs. The transgenic animal and cell are used for medical...

Descriptors: von Willebrand factor, Factor-VIII level reduction, sialyltransferase antisense oligonucleotide expression in e.g. transgenic animal, chimeric animal, gene therapy gene transfer blood-clotting enzyme (Vol.20, No.17)

7/3,K/39 (Item 6 from file: 357) [Links](#)

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0211400 DBA Accession No.: 97-06521 **PATENT**

Transgenic animals expressing antigen-reducing enzyme and complement-inhibitor

- glycosyltransferase gene transfer to transgenic pig or transgenic mouse for use in organ or tissue transplantation

Author: Diamond L E; Logan J; Byrne G W; Sharma A

Corporate Source: Princeton, NJ, USA.

Patent Assignee: Nextran 1997

Patent Number: WO 9712035 **Patent Date:** 970403 **WPI Accession No.:** 97-225881 (9720)

Priority Application Number: US 675773 **Application Date:** 960703

National Application Number: WO 96US15255 **Application Date:** 960923

Language: English

Abstract: ...1,3-galactosyltransferase) masking or reducing levels of xenoreactive antigens, and at least 1 complement-inhibitor (e.g. CD59, DAF and/or MCP, or fibrinogen, **Factor-H**, C4 binding protein, CR1, CR2, C8 binding protein, HRF, MIP, P-18, HRF-20... ..components into a human. The GT may be alpha-1,2-fucosyltransferase, alpha-2,6-sialyltransferase and/or beta-1,3-N-acetylglucosaminyltransferase, and the gene may be cloned via reverse...

Descriptors: ...sialyltransferase beta-1,3-N-acetylglucosaminyltransferase reverse transcription-polymerase chain reaction CD59 DAF MCP fibrinogen **Factor-H** C4 binding protein CR1 CR2 C8 binding protein HRF MIP P-18 HRF-20 MIRL enzyme DNA amplification transformation gene transfer blood- **clotting** transgenic animal mammal fungus (Vol.16, No.12)

7/3,K/40 (Item 1 from file: 149) Links

TGG Health&Wellness DB(SM)

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02422120 **Supplier Number:** 121403449 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Can low-molecular-weight heparin improve the outcome of patients with operable non-small cell lung cancer? An urgent call for research.(opinions/hypotheses)

Alifano, Marco; Benedetti, Giovanni; Trisolini, Rocco

Chest , 126 , 2 , 601(7)

August ,

2004

Publication Format: Magazine/Journal; Refereed

ISSN: 0012-3692

Language: English

Record Type: Fulltext **Target Audience:** Professional

Word Count: 5594 **Line Count:** 00463

...available for clinical studies. In particular, monoclonal antibodies and small molecules targeted to epidermal growth **factor** receptor were evaluated in a randomized setting of patients with advanced disease. (19) Though a...

...distinct steps and mechanisms, but it is well known that the components involved in blood **clotting** contribute to the systemic spread and/or successful implantation of metastatic cancer cells, but probably...

...supports the investigation of drugs possibly inhibiting metastatic spread via the interference in the blood-**clotting** pathway. What is more, both unfractionated heparin (UH) and low-molecular-weight heparin (LMWH) seem...

...in interfere with their behavior. (26) Heparin has been shown to bind basic fibroblast growth **factor** and hepatocyte G **factor** /scatter **factor**, thus inhibiting their potential binding to target cells. (28,29)

Another possible mechanism of anticancer...

...that inhibits platelet aggregation.

More recent studies (45,46) indicate that several anionic molecules that **inhibit** heparanases can diminish the extent of lung colonization by tumor cells. Furthermore, other reports (47...

...of a high rate of metastasis. In particular, the expression of sialylated fucosylated glycans like **sialyl** Lewis x-a correlates with a poor prognosis because of rapid tumor progression and metastatic spreads. Carcinoma cell-surface mucins carrying **sialyl** Lewis x-a can be ligand for three members of the selectin family of cell...

...the pathologic interactions involving carcinoma cells with platelets, leukocytes, and endothelium. Heparin is an excellent **inhibitor** of

P-selectin binding to its natural ligands, presumably by mimicking these ligands, which contain...

...better and more consistent bioavailability, a much more convenient dosing schedule, while selectively inhibiting activated **factor X** (**factor Xa**). Overall, LMWHs are easier to manage in the clinical setting than UH, at least...

7/3,K/41 (Item 2 from file: 149) Links

TGG Health&Wellness DB(SM)

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01712917 **Supplier Number:** 19713937 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Carbohydrate drugs - an ongoing challenge.

McAuliffe, Joseph C.; Hindsgaul, Ole

Chemistry and Industry , n5 , p170(5)

March 3 ,

1997

Publication Format: Magazine/Journal

ISSN: 0009-3068

Language: English

Record Type: Fulltext **Target Audience:** Trade

Word Count: 3450 **Line Count:** 00294

...a number of different proteins and thereby mediate a range of biological functions including blood clotting, formation of new blood vessels (angiogenesis), attachment of cells to extracellular matrix proteins (such as...II trial Cylexin has returned encouraging results for the treatment of tissue damage following lung-clot removal from human patients.(13)
Given the size of the total market for anti-inflammatory...

...a complex mixture of polysaccharides, heparin has been used clinically since 1937 to treat thrombosis (clotting) because of its powerful anti-coagulant activity. Heparin acts by greatly increasing the ability of antithrombin III to inactivate thrombin and factor Xa, enzymes which promote coagulation. It soon became apparent that this form of heparin had ...carbohydrate drug developments in recent years has been the rational design of a small molecule inhibitor (GG167) of the influenza virus, currently being investigated by Glaxo Wellcome and Biota Holdings (ILLUSTRATION FOR FIGURE 6 OMITTED). This analogue of sialic acid prevents the function of the enzyme sialidase responsible for vital attachment to mammalian epithelial...

...modelling tools by Mark von Itzstein's team at Monash University, Melbourne. Interestingly, this substance inhibits mammalian sialidases to a much lesser degree and therefore acts selectively against influenza strains A...

7/3,K/42 (Item 3 from file: 149) Links

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01423176 **Supplier Number:** 14052971 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Relation between sialic acid concentrations and the haemostatic system in the elderly.

Kario, Kazuomi; Matsuo, Takefumi

British Medical Journal , v306 , n6893 , p1650(2)

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1993

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Text:

...acid concentrations and death from cardiovascular disease remains uncertain. Fibrinogen is a well known risk factor for cardiovascular disease and, like sialic acid, is an acute phase reactant. Plasma fibrogen concentrations...

...hypertension and 48 were smokers. Blood samples were collected after an overnight fast, and serum sialic acid concentrations were measured by an enzymatic assay.[5] Serum total cholesterol and triglyceride concentrations...

...determined by enzymatic assays using cholesterol esterase, cholesterol oxidase, and glycerol-3-phosphate oxidase. The clotting activity of plasma fibrinogen and factor VII was determined by automated one-stage clotting assays. Plasma concentrations of antithrombin III, heparin cofactor II, plasminogen, and [alpha].sub.2]-plasma inhibitor were determined by chromogenic methods. The following variables were determined by enzyme linked immunoassay (ELISA): lipoprotein(a) (Biopool, Sweden), factor VII antigen, and D-dimer (Diagnostica Stago, France), complex of tissue plasminogen activator and its inhibitor-1, active tissue plasminogen activator inhibitor-1 antigen, plasmin-[alpha].sub.2]-plasmin inhibitor complex (Teijin Co, Japan), and thrombin-antithrombin III complex (Behringwerke AG, Germany). Student's t...

...coefficients were calculated for the different variables.

There was a strong positive correlation between serum sialic acid concentrations and those of plasma fibrinogen and heparin cofactor II in these elderly men (figure). Serum sialic acid concentrations also

showed weak but significant positive correlations with the following variables: **factor VII** antigen ($r=0.223$, $p<0.01$), complex of tissue plasminogen activator and its **inhibitor** ($r=0.282$, $p<0.001$), plasminogen ($r=0.356$, $p<0.001$), $[\alpha].sub.2]$ -plasmin **inhibitor** ($r=0.291$, $p<0.001$), thrombin-antithrombin III complex ($r=0.203$, $p<0.02$), plasmin- $[\alpha].sub.2]$ -plasmin **inhibitor** complex ($r=0.232$, $p<0.01$), triglycerides ($r=0.200$, $p<0.02$), and...

...0.53) g/l, $p<0.01$), and the six subjects with the highest serum **sialic** values were smokers, but the difference in mean serum **sialic** acid concentrations between smokers and non-smokers was not significant (0.58(0.09) [nu...

...0.05).

Comment

Our study confirmed the results of previous reports that serum concentrations of **sialic** acid show a weak positive correlation with triglyceride values.[2] In addition, **sialic** acid concentrations showed significant correlations with the plasma concentrations of procoagulant factors (fibrinogen and **factor VII** antigen), activation markers of coagulation (thrombin-antithrombin III complex and plasmin- $[\alpha].sub.2]$ -plasmin **inhibitor** complex), protease **inhibitors** (antithrombin III and heparin cofactor II), and fibrinolytic variables (plasminogen and $[\alpha].sub.2]$ -plasmin **inhibitor**). All these factors are closely related to each other by various compensatory feedback mechanisms. In...

...heparin cofactor II values. These close positive correlations may be due to the fact that **sialic** acid, fibrinogen, and heparin cofactor II are all acute phase reactants. Alternatively, an increase in highly sialiated fibrinogen may be expressed as an increase in serum **sialic** acid concentrations. Smoking increased concentrations of both fibrinogen and **sialic** acid in this study. Our results thus indicate that fibrinogen may perhaps be the confounder that explains the apparent relation between high serum **sialic** acid concentrations and death from cardiovascular disease.

[1] Lindberg G, Eklund GA, Gullberg B, Rastam...

Descriptors:

...Blood clotting--

7/3,K/43 (Item 1 from file: 159) [Links](#)

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01130092 PMID: 78623633

DYSFIBRINOGENEMIA ASSOCIATED WITH HEPATOMA. INCREASED CARBOHYDRATE CONTENT OF THE FIBRINOGEN MOLECULE.

Gralnick; Givelber; Abrams

Hematology Service, Clinical Pathology Dept., Clinical Center, NIH, Bldg. 10, Room 5N-236, Bethesda, MD, 20014

N Engl J Med

1978 ,

299 (5) p221-226 , ISSN 0028-4793

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...these patients demonstrated prolongation of the prothrombin, thrombin, and reptilase times not related to coagulation-factor deficiency, while plasminogen, fibrinogen degradation products, plasminogen and euglobulin clot lysis time were normal. Both purified fibrinogen and plasma from the hepatoma patients **inhibited** the coagulation of normal plasma and fibrinogen. Fibrinogen purified from the plasma of two of these patients **clotted** slower than normal with thrombin and reptilase, and differed from normal fibrinogen on immunodiffusion, immunoelectrophoresis... ..high ionic strengths. Carbohydrate analysis of the two purified abnormal fibrinogens revealed increased levels of **sialic acid** (27 and 38%), neutral sugars (43 and 50%), and hexosamines (2.24 and 2.72%). Removal of **sialic acid** from the abnormal fibrinogen by neuraminidase treatment brought the thrombin time and the fibrin-monomer polymerization curves towards normal. The **sialic acid** content of the abnormal fibrinogen was similar to that of fetal fibrinogen, indicating that...

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